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1. Overview

1.1 Literacy Instruction and the CCSS-ELA & Literacy

The Common Core State Standards for English Language Arts and Literacy in History/Social Studies, Science, and the Technical Subjects (CCSS-ELA & Literacy) adopted by Indiana in 2010, highlight the importance of literacy to the development of content understanding. In order to make sure all of Indiana's students can meet these standards, it is important for corporations and schools to increase their attention to literacy instruction in grades 6–12. Beginning in grade 4 and continuing into middle and high school, the focus in literacy shifts from *learning to read* to *reading to learn*. Students must use reading more frequently to acquire subject area content. Unfortunately, these students often continue to struggle to read complex, content area text, despite making gains in early literacy.[1] This means that students need additional instruction in reading and learning from texts. The challenge is that, as content and texts become more complex, the skills required to read them become more specialized. Although the term *literacy* has historically referred to the ability to read today, *disciplinary literacy* refers to "the use of reading, reasoning, investigating, speaking, and writing required to learn and form complex content knowledge appropriate to a particular discipline." [2][3]

In order to develop disciplinary literacy, it is important to consider both the common and unique literacy demands of different content areas in planning instruction. Because the CCSS-ELA & Literacy also support this approach, it is necessary for all educators of students in grades 6–12 to design and implement standards-aligned units and lessons that integrate language, literacy skills, and instructional support strategies with content area instruction. When middle and high school teachers embrace their role as disciplinary literacy educators and introduce specific strategies to support literacy needs, students acquire and retain content material more effectively. This section of the Indiana 6–12 Literacy Framework (Framework) describes in detail effective disciplinary literacy instruction and provides a number of research-based strategies to support its full integration into school, corporation, and state curriculum.

[1] Perle, M., Grigg, W., & Donahue, P. (2005). The nation's report card: Reading 2005 (NCES-2006-451). Washington, DC: U.S. Department of Education, National Center for Education Statistics.

2 McConachie, S.M., & Petrovsky , A.R. (2010). Engaging content teachers in literacy development. In S. McConachie, & A. Petrosky (Eds.), Content matters: A disciplinary literacy approach to improving student learning (1–13). San Francisco, CA: Jossey-Bass.

3 Ibid., p.4

1.2 Excellent Instruction for All Students: The RtI Model

Indiana's Response to Instruction model reflects the state's commitment to helping all students achieve their learning goals. The Response to Instruction *Foundations for Implementation* document[4] provides a detailed discussion of the model. For the Framework, the RtI model provides the foundation for a tiered approach to disciplinary literacy instruction. It requires two things of corporations and schools relative to this section of the Framework:

1. Provide comprehensive, effective core (Tier 1) instruction to all students in every content area
2. Provide additional targeted (Tier 2) or intensive (Tier 3) instruction to all learners for whom Tier 1 instruction is inadequate or ineffective

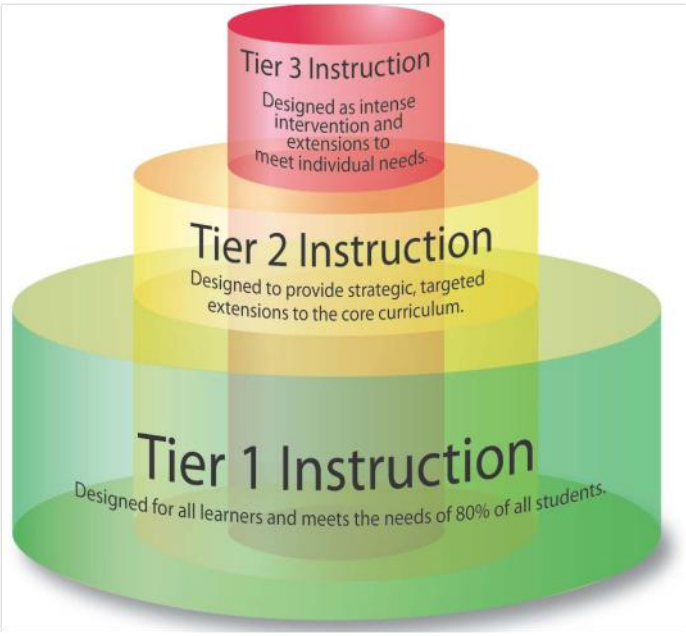


Figure 1. Indiana's Response to Instruction Model

The first responsibility of corporations and schools is to provide effective core (Tier 1) disciplinary literacy instruction for all students in every content area. This includes a number of things:

- Ensuring all students have access to high quality, complex texts
- Providing all students with instruction by content teachers
- Integrating rich writing and discussion into content instruction at all levels
- Providing explicit instruction in literacy strategies that support the acquisition of content understanding
- Differentiating instruction in content classrooms to ensure all students can access the core curriculum

It is important to remember that all these things should all take place in core content classrooms. That is, differentiation and strategy instruction should be implemented by content area teachers in their classrooms, rather than by interventionists or in pull-out programs. The best way to provide all students with access to high quality curriculum is to ensure they spend their time in content classrooms. This section of the Framework provides strategies for supporting this effort. Corporation and school literacy teams should make it a priority to consider the RtI model in their curriculum development and alignment efforts.

[4] Indiana Department of Education (2010). *Response to Instruction Foundations for Implementation.* Retrieved from http://www.doe.in.gov/rti/docs/RtI_Guidance_Document.pdf

The second responsibility inherent in the RtI model is to provide additional effective targeted (Tier 2) or intensive (Tier 3) instruction for learners when Tier 1 instructional approaches are inadequate or ineffective. For middle and high schools, corporations, schools, and teachers should focus Tier 2 and Tier 3 instruction on the following practices:

- Using data to identify students for whom Tier 1 instruction is ineffective or inadequate
- Providing additional differentiation the content classroom and integrating strategies that support the development of critical literacy skills for struggling and advanced learners
- Focusing on the development of skills that students need to acquire content knowledge
- Integrating targeted and more intensive skills instruction with the curriculum needs of core content classes

Although certain interventions are best delivered outside the content classroom, the goal of Indiana's RtI model is to provide students with as much access to the core curriculum as possible. For this reason, Tier 2 interventions, in particular, should be considered the responsibility of core content teachers. The *Assessment* section of the Framework and the *Response to Instruction Foundations for Implementation* document provide additional information on implementing the RtI model in Indiana.

2. Provide Comprehensive core (Tier 1) Literacy instruction

Strategic and critical use of language and literacy skills contributes to all students' ability to learn curriculum across the content areas. Therefore, all students need to participate in core disciplinary literacy instruction that contributes to proficiency with the CCCS ELA & Literacy and helps students acquire content knowledge. The focus on content is especially important. Content teachers are in the best position to help students learn their subjects. Rich disciplinary understanding cannot be fully developed when packaged reading programs take the place of subject area curriculum or subject area instructors. For this reason, Indiana is committed to focusing 6-12 education on powerful, content-rich, literacy-rich instruction in all subjects.

There are three principles of effective disciplinary literacy instruction:

1. **Regular access to complex text.** Provide all students with daily opportunities to read, write about, discuss, and demonstrate their comprehension of appropriately complex fiction and informational texts.
2. **Effective instructional design.** Design effective instructional units and lessons, aligned with the CCSS-ELA & Literacy that emphasize literacy instruction.
3. **Explicit strategy instruction.** Provide explicit instruction in *foundational* and *discipline specific* literacy strategies that build comprehension, vocabulary, and writing capacity.

2.1 Principle 1: Regular Access to Complex Text

It has been well established in the literacy research that schools, corporations, and states need to increase the attention paid to developing students' capacity to work with complex texts.[5, 6,7] The complexity of college and workplace texts has been increasing steadily for decades, while the complexity of text taught in K–12 has held steady or decreased. This means that Indiana students, when they leave high schools for work or college, may not have had sufficient practice reading and learning from the types of texts they will certainly encounter. Building sophisticated content understanding requires that students regularly read texts that are *appropriately complex*. This means that the text is neither too difficult for the student to learn from, nor too simplistic to engage that student. Most learners have had both the frustrating experience of trying to read an overly complex text and the equally exasperating experience of believing his or her time is being wasted with an overly simple one. Students learn best from rich, engaging texts at their level of reading ability.[8]

[5] ACT. (2006). Reading between the lines: What the ACT reveals about college readiness in reading. Iowa City, IA: Author. Available from http://www.act.org/research/policymakers/reports/reading.html

6 Adams, M. J. (2009). The challenge of advanced texts: The interdependence of reading and learning. In E. H. Hiebert (Ed.), Reading More, Reading Better (pp. 163–189). New York: Guilford.

7 Williamson, G. L. (2008). A Text Readability Continuum for Postsecondary Readiness. Journal of Advanced Academics, 19(4), 602-632.

8 Biancarosa, G., & Snow, C. E. (2004). Reading next—A vision for action and research in middle and high school literacy: A report to Carnegie Corporation of New York. Washington, DC: Alliance for Excellent Education.

To address this issue, the CCSS-ELA & Literacy's Reading Standard #10 identifies the ability to read increasingly complex texts as requisite for college and career readiness and describes the level of text complexity students should be able to handle at each grade level. The standard requires that students be able to comprehend literature and informational texts in three grade-level bands of text complexity: 6-8, 9-10, and 11-12.

In order to help students meet the grade level benchmarks this standard identifies, schools must consider two important points. First, corporations and schools must have an understanding of the College and Career Readiness (CCR) text complexity bands. Second, schools must provide all students with *daily* opportunities to read, write about, discuss, and demonstrate their comprehension of appropriately complex fiction and informational texts.

Building sophisticated content understanding requires that students regularly read texts that are *appropriately complex*.

The CCSS-ELA & Literacy utilizes a three-part model for understanding and measuring text complexity. This model advocates examining quantitative and qualitative measures of text complexity, and matching those to the reader and the task. Although the developers of the standards acknowledge that there are no perfect measures of text complexity, the widespread adoption of Lexiles by book publishers and educational institutions has provided at least one metric by which to determine whether a student will be able to learn from a given text. A Lexile score is a measure of the relative difficulty of a given text. It is used to refer both to texts themselves and student reading levels. These measures are aligned with the CCSS-ELA & Literacy and are widely used. Table 1 lists the CCR text complexity bands and their accompanying Lexile levels for grades 6–12.

Table 1. CCR Text Complexity Lexile Level Ranges

CCR Text Complexity Band	Lexile Level Range
6-8	955-1155
9-10	1080-1305
11-CCR	1215-1355

Lexiles and other quantitative and qualitative measures of text have made the task of classifying those texts easier. Determining an *appropriately complex text* for each student, however, is not a simple task. However, considering the reading level of a text is by no means the only way to address the issue, nor is it sufficient. It does suggest that, in order to identify appropriate texts for students, it is important to have an understanding of a student's current reading ability, something many schools that serve students in grades 6–12 struggle to do. The *Assessment* section of the Framework discusses assessment approaches corporations, schools, and teachers can use to obtain some of this information.

The challenges of text selection notwithstanding, in order for middle and high school students to develop the necessary skills to comprehend complex texts, they must have daily opportunities to read, write about, think about, and discuss complex texts. Making such activities a regular part of all content area courses can help students build the disciplinary literacy expertise they need for success in college or careers.[9] While there is no definitive recommended "amount" of interaction with complex text, it remains that most corporations and schools need to increase the amount of student interaction with these texts.

Leadership Tool 4: Literacy Walkthrough Checklist Template can provide a starting point for literacy teams to determine how much reading, writing, thinking about, and discussion of complex texts is currently occurring in classrooms. Schools can use this information to think about how to increase this amount. The next two principles provide additional detail on engaging students in these activities.

While there is no definitive recommended "amount" of interaction with complex text, it remains that most corporations and schools need to increase the amount of student interaction with these texts.

2.2 Principle 2: Effective Instructional Design

To impact student understanding of middle and high school content, the second principle is the design of effective instructional units and lessons, aligned with the CCSS-ELA & Literacy, which emphasize literacy instruction. To help schools and corporations with this task, the Framework provides information about the standards themselves as well as instructional design principles for developing aligned curriculum and instruction.

The CCSS-ELA & Literacy

Indiana's adoption of the CCSS-ELA & Literacy has both curricular and instructional implications for corporations and schools throughout the state. Because Indiana now has a concise set of literacy expectations for all students in grades 6-12, corporations and schools must now work to understand and implement the these standards in curriculum at all levels.

[9] Carnegie Council on Advancing Adolescent Literacy. (2010). *Time to act: An agenda for advancing adolescent literacy for college and career success*. New York, NY: Carnegie Corporation of New York.

One of the most powerful contributions of the CCSS-ELA & Literacy to education at the 6–12 level is the identification and explication of the reading, writing, thinking, and communication skills that prepare students for success in college and careers. It is the fluent use of these skills in disciplinary literacy that supports content knowledge acquisition across the curriculum. The CCR Anchor Standards provide concise descriptions of the skills students should have when they graduate high school and fall into four categories.

- Reading
- Writing
- Speaking and Listening
- Language

In adopting and implementing these standards, Indiana educators have committed to helping all students attain these skills. Although the standards themselves are important to consider, it is also necessary for corporations and schools to develop an understanding of the major instructional shifts embedded in the CCSS-ELA & Literacy. These shifts have implications for all areas of literacy improvement and should be a primary consideration in the development of a literacy action plan. Indiana recognizes four major shifts in literacy that must be acknowledged in order to implement the CCSS-ELA & Literacy successfully:

- Building knowledge through content-rich nonfiction
- Reading, writing, and speaking grounded in evidence from text, both literary and informational
- Practicing regularly with complex text and its academic language
- Utilizing literacy strategies and building knowledge in all content areas

Instructional Shift: The CCSS-ELA & Literacy focuses on utilizing literacy strategies and building knowledge in all content areas.

Understanding and implementing these shifts will be required for corporations and schools to help students achieve proficiency on the CCSS-ELA & Literacy. The first instructional shift, utilizing literacy strategies and building knowledge in all content areas, makes clear that building students' capacity to read, write, think, and communicate in the language of a discipline is an important part of college and career readiness. As such, it is everyone's job. What follows is a brief explanation of the anchor standards and the other three major instructional shifts.

College and Career Anchor Standards for Reading

The College and Career Readiness Anchor Standards for Reading require students to develop, practice, and use critical thinking and analysis skills with both literary and informational texts. They require the use of complex, diverse texts that challenge all students at the appropriate level. Embedded in this set of standards is the following instructional shift: a focus on building knowledge through content-rich nonfiction. Although the CCSS-ELA & Literacy include both literary and instructional standards, there is a

Instructional Shift: The CCSS-ELA & Literacy focuses on building knowledge through content-rich nonfiction.

strong emphasis on increasing the amount and complexity of the informational texts students interact with to learn content. An important step for schools and corporations in the implementation of the CCSS-ELA & Literacy will be to assess the amount of content-rich nonfiction students currently read and identify strategies for increasing it in all content areas.

The CCR Anchor Standards for Reading include four main areas of instruction:

- Key ideas and details
- Craft and structure
- Integration of knowledge and ideas
- Range of reading and level of text complexity

Table 2. CCR Anchor Standards for Reading

Area of Focus	Standard Number	Description
Key Ideas and Details	1.	Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from text.
	2.	Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.
	3.	Analyze how and why individuals, events, and ideas develop and interact over the course of a text.
Craft and Structure	4.	Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.
	5.	Analyze the structure of texts, including how specific sentences, paragraphs, and larger portions of the text (e.g., a section, chapter, scene, or stanza) relate to each other and the whole.
	6.	Assess how point of view or purpose shapes the content and style of a text.
Integration of Knowledge and Ideas	7.	Integrate and evaluate content presented in diverse formats and media, including visually and quantitatively, as well as in words.
	8.	Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.
	9.	Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.
Range of Reading and Level of Text Complexity	10.	Read and comprehend complex literary and informational texts independently and proficiently.

Anchor Standards for Reading 1–3 focus on expectations that students should be able to make logical inferences and cite evidence from the text, determine the main idea, analyze aspects of the text, and follow events and characters throughout a complex piece. The standards require students to identify the elements of plot, themes, and supporting details. Students are asked to use texts to draw and support conclusions with appropriate citations.

Anchor Standards for Reading 4–6 focus on the craft and structure of texts as objects of study. Students are asked to interpret the author's meaning and intentions, understand and use figurative language, assess point of view, and analyze how the structure of texts can affect the meaning. These standards focus on writer's craft as a tool for understanding text on a deeper level. Students must be able to consider an author's style, choice of words, and format as a way of moving the piece forward.

Anchor Standards for Reading 7–9 deal with the integration of knowledge and ideas. They ask students to evaluate text content and present information in multiple forms. These standards also require students to evaluate claims made within a text and use multiple texts to support a theme or topic, build knowledge, or compare the different crafts of various authors. Finally, Anchor Standard for Reading ten addresses the range and frequency of use for fiction and non-fiction texts.

Instructional Shift: The CCSS-ELA & Literacy focuses on practicing regularly with complex text and its academic language.

The Anchor Standards require ongoing exposure to both literary and informational texts toward the goal of independent use and proficiency. Importantly, this set of standards also embeds the following instructional shift: a focus on practicing regularly with complex text and its academic language. The CCSS-ELA & Literacy makes very clear the importance of increasing the complexity of text students interact with to develop content understanding. As discussed above, corporations and schools should consider text complexity carefully in the development and alignment of curriculum for grades 6-12.

College and Career Anchor Standards for Writing

The Anchor Standards for Writing also fall into four categories:

- Text types and purposes
- Production and distribution of writing
- Research to build and present knowledge
- Range of writing

The standards prepare students to communicate thinking, ideas, and messages to a larger audience. Students must use proper conventions, means, and types of writing to communicate effectively.

Table 3. CCR Anchor Standards for Writing

Area of Focus	Standard Number	Description
Text Types and Purposes for Writing	1.	Write arguments to support claims in an analysis of substantive topics or texts, using valid reasoning and relevant and sufficient evidence.
	2.	Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.
	3.	Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details, and well-structured event sequences.
Production and Distribution of Writing	4.	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
	5.	Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.
	6.	Use technology, including the internet, to produce and publish writing and to interact and collaborate with others.
Research to Build and Present Knowledge	7.	Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
	8.	Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
	9.	Draw evidence from literary or informational texts to support analysis, reflection, and research.
Range of Writing	10.	Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of tasks, purposes, and audiences.

Anchor Standards for Writing 1—3 address text types and purposes. Students are required to produce three distinct types of writing: argumentative, expository, and narrative. The first type of writing, argumentative, requires students to support a claim with evidence. The second type of writing, expository or informational, requires students to synthesize information and present it concisely. Narrative writing requires students to write about experiences or events using literary techniques, thorough details. Although all three types of writing are significant, this set of standards contains an important instructional shift in the CCSS-ELA & Literacy: a focus on reading, writing, and speaking grounded in evidence from text, both literacy and informational. Because it supports critical thinking, problem solving, and the appreciation for multiple viewpoints, the ability to support writing with textual evidence is particularly important to the acquisition of content knowledge in grades 6-12 and success in college and careers. To implement this shift, corporations and schools should identify the types and amounts of

writing students currently do and think about how to increase the amount and quality of writing required by the curriculum in which students must support their ideas with textual evidence. Anchor Standards for Writing 4–6 focus on the process of writing and the use of technology communicate to a broad audience. They explain how students should be able to tailor their writing to a specific audience, for a specific purpose. They also require students to engage in the writing process and practice the steps of drafting, editing, revising, rewriting, and trying different approaches to publish the strongest piece possible. Students should develop proficiency in using technology both to produce and publish writing.

Instructional Shift: The CCSS-ELA & Literacy focuses on Reading, writing, and speaking grounded in evidence from text, both literary and informational

Anchor Standards for Writing 7–9 focus on the research process. Students should conduct research projects of various sizes to practice the investigative process. They should develop their own questions and gather multiple sources of information to support their answers. They should then draw evidence for those sources and use that evidence to support their analysis in well-organized arguments and presentations of their research process. Finally, Anchor Standard for Writing 10 asks students to write routinely and to experience varied tasks and purposes for writing. This standard reminds corporations and schools that, to become proficient writers and communicators in a discipline, students must write frequently about content, in a variety of forms, for a variety of purposes.

College and Career Anchor Standards for Speaking and Listening

The Common Core College and Career Readiness Anchor Standards for Speaking and Listening focus on two areas of development:

1. Comprehension and Collaboration
2. Presentation of Knowledge and Ideas

These standards acknowledge the increasing need for effective communication skills. In the 21st century, students must fully develop a variety of speaking and listening skills to be able to communicate successfully with the global community. Students must engage in a variety of structured conversations in a number of different formats—in small groups, as a whole class, and through online forums. These varied domains will allow students to experience new technologies and learn the conversational conventions for each. With new technologies on the rise, students must meet the new challenges of a digital society and be ready to participate in new forms of discussion. It is important for the curriculum to include instructional opportunities for students to engage in a variety of conversations, and to participate as both a speaker and an active listener.

Table 4. CCR Anchor Standards for Speaking and Listening

Area of focus	Standard Number	Description
Comprehension and Collaboration	1.	Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.
	2.	Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.
	3.	Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.
Presentation of Knowledge and Ideas	4.	Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.
	5.	Make strategic use of digital media and visual displays of data to express information and to enhance understanding of presentations.
	6.	Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.

Anchor Standards for Speaking and Listening 1–3 require students to plan, prepare, and participate in a variety of conversations with different purposes and audiences. Students should be able to converse orally and through written, online communication forums. They must be able to persuade an audience, represent their ideas clearly, and evaluate the information they gather from online or oral conversations and to determine its relevance and importance. They should also be able to evaluate a speaker's purpose, point of view, and evidence to determine whether his or her information is reliable and sound.

Anchor Standards for Speaking and Listening 4–6 require students to fully understand the purpose of their conversation and the audience they are addressing. Students must be able to support their communications with visual or digital displays when appropriate and demonstrate a command of the English language appropriately when communicating with a variety of audiences.

College and Career Anchor Standards for Language

Understanding and using the English language is a complex task, which students need to develop and practice over time. The Anchor Standards for Language outline three areas for development:

- Conventions of Standard English
- Knowledge of the Language
- Vocabulary Acquisition and Use

There are six total anchor standards in this area. These standards guide the use of the English language and help students to learn and understand its power. The standards apply to both written and oral language development.

Table 5. CCR Anchor Standards for Language

Area of Focus	Standard Number	Description
Conventions of Standard English	1.	Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
	2.	Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.
Knowledge of the Language	3.	Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.
Vocabulary Acquisition and Use	4.	Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials as appropriate.
	5.	Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
	6.	Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when considering a word or phrase important to comprehension or expression.

Anchor Standards for Language 1–2 focus on conventions or the standard uses of language. There are two standards represented in this area. Students must develop proficiency of grammar, usage, and mechanics both when speaking and writing.

Anchor Standard for Language 3 requires students to apply their knowledge of the language and how it works to the most appropriate context for each situation. Students must be able to make appropriate language choices when reading, writing, speaking, and/or listening.

Anchor Standards for Language 4–6 focus on vocabulary. These standards requires students to use a variety of strategies to gain vocabulary information for text, express an understanding of figurative language, and build a vocabulary that supports acquisition of complex disciplinary concepts.

Knowledge and use of the English language requires frequent and on-going practice in a variety of areas. Students must understand and appreciate the conventions of the language, word usage rules, language types, and the different terms necessary to comprehend material and converse with others. Given the strong focus of the CCSS-ELA & Literacy on vocabulary, it is important to provide many opportunities over time for varied and supported practice.

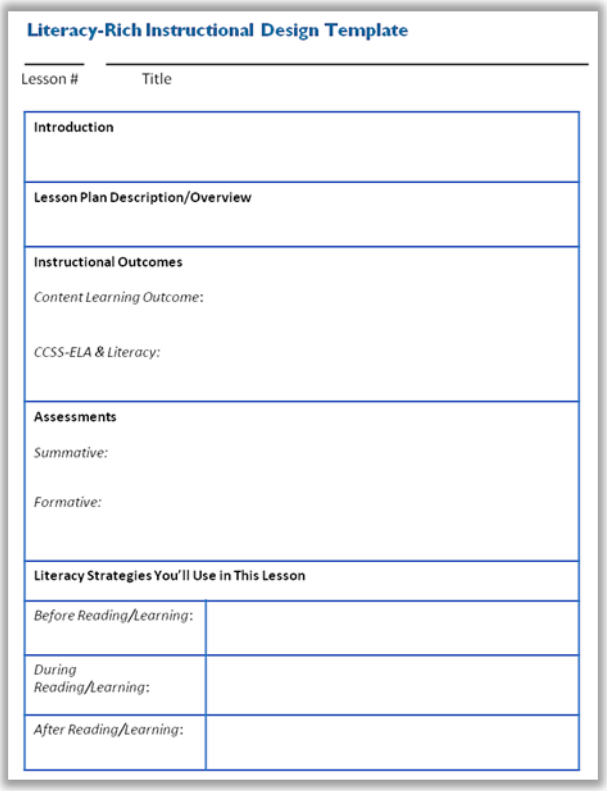
Principles of Design: Instructional Units and Lessons

Understanding the CCSS-ELA & Literacy is the first step in designing purposeful, rigorous, and appropriately challenging lessons and units for students. These standards should guide the instructional design process and help corporations, schools, and teachers identify the skills necessary for students to be college and career ready. The following design principles will support teachers in creating the most effective literacy-based units and lessons:

- Design lessons and units that are standards-focused and assessment-driven
- Balance text complexity with cognitive demand
- Practice gradual release of responsibility
- Differentiate instruction to meet the needs of all learners

Design Lessons and Units that are Standards-Focused and Assessment-Driven

Creating units and lessons that are aligned with the CCSS-ELA & Literacy requires careful consideration of a number of design principles. For example, the Common Core[10] has developed curriculum maps for grade 6–12 that include content-rich material and embed language and literacy skills that are aligned with the CCSS-ELA & Literacy. These maps include several key features:



Literacy-Rich Instructional Design Template

Lesson # Title

Introduction
Lesson Plan Description/Overview
Instructional Outcomes *Content Learning Outcome:* *CCSS-ELA & Literacy:*
Assessments *Summative:* *Formative:*
Literacy Strategies You'll Use in This Lesson

Before Reading/Learning:	
During Reading/Learning:	
After Reading/Learning:	

*Figure 2. **Instructional Tool 1: Literacy Rich Instructional Design Template***

- Focus standards for each unit and a curriculum map to ensure that all of the grade level standards are addressed in a year's curriculum
- Classroom-based assessments at the conclusion of the unit to demonstrate proficiency on the identified standards
- Appropriately complex texts across a range of Lexile levels that address specific content-rich topics. (See Appendix B of CCSS-ELA & Literacy for examples of exemplar texts.)
- Essential questions to frame the unit

[10] Common Core (www.commoncore.org). See this Website for examples of content-rich units and lessons that are aligned with the CCSS-ELA.

- A series of lessons designed to address one or more of the focus standards. Lessons typically include objectives, specification of materials, an articulated sequence of instructional actions, and formative assessments to monitor student success.

There are a number of widely available lesson and unit design templates that corporations and schools can use for instructional design. *Instructional Tool 1: Literacy Rich Instructional Design Guide* provides one approach. If corporations or schools are developing consistent lesson or unit plan formats to align curriculum to the CCSS-ELA & Literacy, it will be important to think about how these elements of design can be effectively incorporated.

Balance Text Complexity with Cognitive Demand

An important instructional shift in the CCSS-ELA & Literacy is the focus on practicing regularly with complex text and its academic language. For students to meet the standards, they must have regular opportunities to read, write about, think about, and discuss appropriately complex text. To help students access more complex text, is important to remember both the cognitive demands of an assignment and the complexity of a text itself impact comprehension.[11]

The relationship between these two elements—cognitive demands and text complexity—should be an inverse one. However, this is an area in which well-meaning educators often act in ways that undermine, rather than support, literacy skill development. Specifically, once educators have developed an awareness of the need for leveled content texts in their classrooms, they often make the mistake of pairing complex texts with complex cognitive tasks, and simple texts with simple cognitive tasks. Although their intentions are good, in order to support both academic content development and literacy skill development, educators should be taking the exact opposite approach. Simpler texts should be accompanied by more complex cognitive tasks; and complex texts should be accompanied by less demanding cognitive tasks. In this way, the adolescent brain is able to focus on one highly complex area at a time. This builds content and literacy capacity more effectively than trying to split the brain's attention, or avoiding giving it anything to focus on at all. The overall goal, of course, is to scaffold students into increasingly complex texts at the appropriate CCSS-ELA & Literacy grade level band.

For students to meet the standards, they must have regular opportunities to read, write about, think about, and discuss appropriately complex text.

Practice Gradual Release of Responsibility

One of the most effective instructional approaches for helping students learn new skills is the Gradual Release of Responsibility model.[12] In this model, the teacher begins with explicit skill instruction and

[11] Conley, M. (2008). Cognitive strategy instruction for adolescents: What we know about the promise, what we don't know about the potential. *Harvard Educational Review, 78*(1) 84–108.

[12] Pearson, P. D., & Gallagher, M. C. (1983). The instruction of reading comprehension. *Contemporary Educational Psychology*, 8, 317–344.

gradually transfers the responsibility for use of that skill to the students in a precise series of stages. In this way, students ultimately assume full responsibility for their use of the skill. The gradual release of responsibility model involves multiple phases of instruction. Fisher and Frey captured this model in Figure 3.[13]

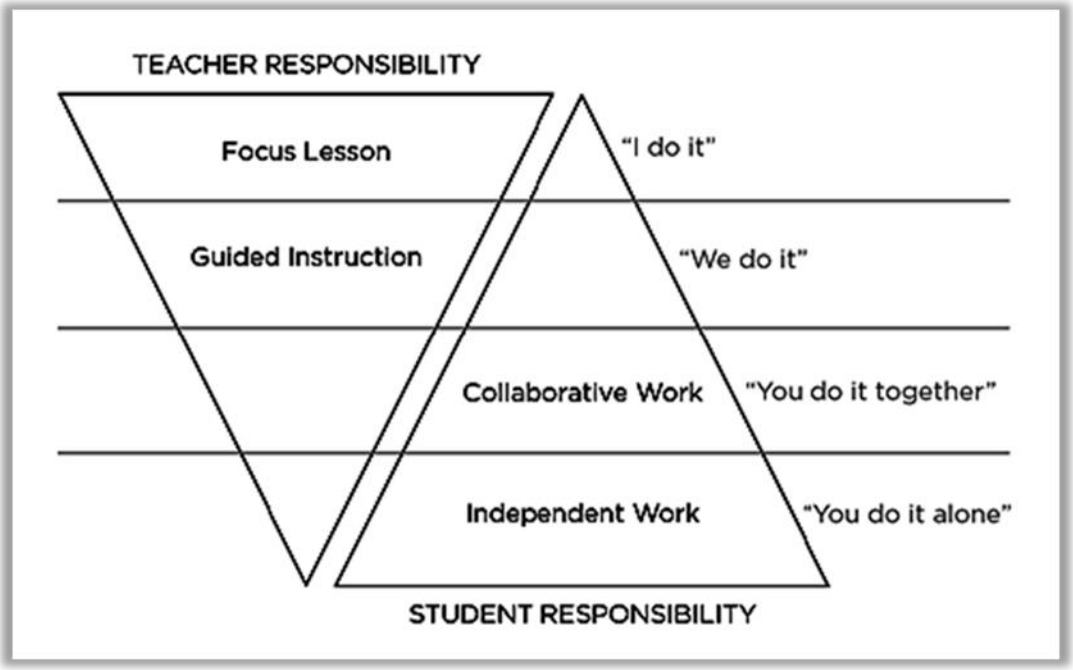


Figure 3. Gradual Release of Responsibility Model

In the first stage, the teacher introduces and models the skill or skills. The instructor demonstrates the process and answers questions about it. For the more complex skills, the teacher may need to provide several examples and/or demonstrations. In the second stage, the teacher works with students as they practice together. During stage three, the teacher shifts more responsibility to students, placing them in collaborative groups to practice and get support from one another. Finally, in stage four, students use the strategy or the skill independently, without support from their peers or the teacher. This is the final goal of the instructional process. There are no set time limits for each phase; instead, progress is dictated by student needs.

The gradual release model provides students with multiple practice opportunities and consistent support from their peers and the teacher. This process helps students to gain confidence when learning and acquiring new skills. When students can use specific reading and writing skills independently, then the teacher is better able to introduce more complex tasks and texts. Effective lessons and units rely on the process of gradual release to introduce new skills and strategies.

[13] Fisher, D. & Frey, N. (2008). *Better learning through structured teaching.* Alexandria, VA: Association for Supervision and Curriculum Development.

Differentiate Instruction to Meet the Needs of All Learners

Effective instruction at all tiers is designed to meet the needs of each student. To do this requires teachers to differentiate their instructional approaches, materials, and content to ensure all students are appropriately challenged and provided with opportunities to access rich content. There are three primary ways to differentiate instruction to meet the needs of all students: content, process, and product.[14,15] Each differentiation method relies on a student's readiness to learn, academic interests, and learning profile. The principles described above, cognitive task cycles, and the gradual release model can be used in conjunction with mode of differentiation.

Differentiation rests upon three important premises. The first is that all students deserve and need respectful tasks—tasks that are challenging, interesting, and worth doing—in order to learn effectively. The second is that groupings of students should be flexible and responsive to student needs with respect to individual topics or lessons. This means that heterogeneous groups of students may be most effective in one circumstance, while homogeneous groupings might be called for in another. The important point here is that these groupings should not remain stagnant and should be determined based on current need. The third premise is that instruction is most effective with ongoing monitoring and assessment. The *Assessment* section of the Framework provides additional information about developing an effective system of instruction.

Differentiating According to Student Characteristics

There are three student characteristics according to which teachers may differentiate instruction: readiness, interests, and learning profile. For each instructional unit, a student's readiness to learn the content will depend on prior experience with the subject and the skills or dispositions with which a student enters the classroom. Students bring their interests to bear upon all learning opportunities, and considering these interests helps students become more invested in the learning process. A student's learning profile helps teachers identify students' strengths, areas for growth and development, and learning preferences and styles. No matter the subject, students do not begin from the same place. To begin the process of differentiating, it is important for teachers to have some understanding of these student characteristics and make instructional decisions based on this information.

Differentiation of Instructional Content, Process or Product

Differentiation of instruction can occur in three different areas: content, process, and product. Teachers may opt to differentiate content by providing leveled reading materials, different amounts of information provided at once or over time or using a different format for delivery. Process differentiation involves varying the mode of instruction itself. This might include using different literacy strategies with different students or giving students choices about which strategies to employ or how to structure their learning process. Finally, teachers may differentiate the product of instruction. This may involve providing different choices, coaching, or assignments to students, based on their current needs. Figure 4 illustrates the components of differentiation.

[14] Tomlinson, Narvaez L., & Brimijoin, K. (2008). *The Differentiated school: Making revolutionary changes in teaching and learning.* Alexandria, VA: Association for Supervision and Curriculum Development.

[15] Tomlinson, C. (1999). *The differentiated classroom: Responding to the needs of all learners.* Alexandria, VA: Association for Supervision and Curriculum Development.

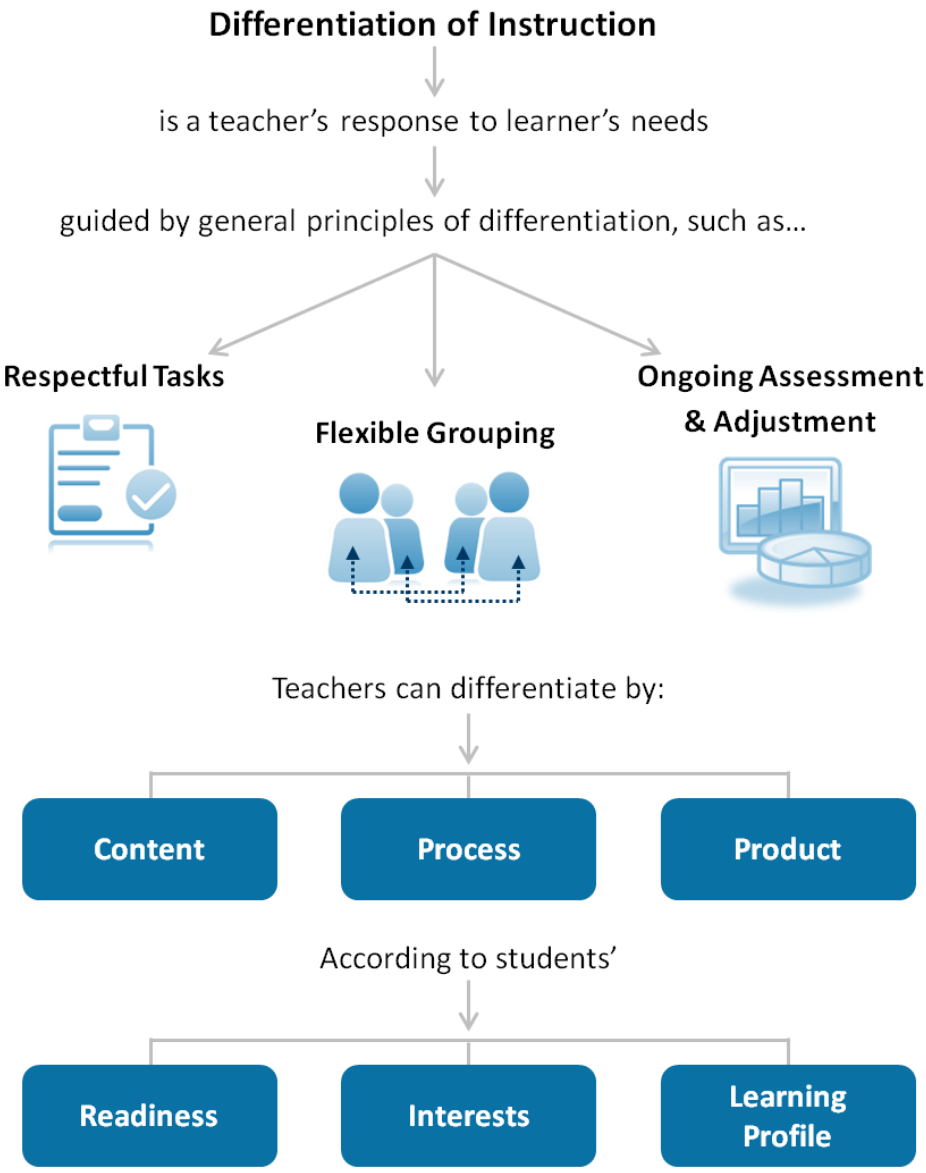


Figure 4. Differentiation of Instruction Content, Process, or Product

2.3 Principle 3: Explicit Strategy Instruction

The third principle in building an effective tier of core instruction involves providing explicit instruction in *foundational* and *discipline specific* literacy strategies that build comprehension, vocabulary, and writing capacity.

Learning to read in the content areas in middle and high schools requires two types of literacy strategy instruction: *foundational* and *disciplinary*. Indiana defines *foundational literacy strategies* as those

practices that build the capacity of students to do the things all good readers do: summarizing, visualizing, predicting, making inferences, and questioning. Research supports the idea that struggling readers must be taught how to use the strategies that proficient readers naturally use to access the meaning of content texts.[16, 17] For example, by teaching, modeling, and practicing Reciprocal Teaching[18] or annotation or text coding strategies, students learn to comprehend, interact with, and question a variety of texts in multiple content areas. Since these are independent learning skills important across content areas, foundational literacy support strategies are best taught and practiced in cross content contexts.

In addition to foundational literacy strategy instruction, providing targeted, direct *disciplinary literacy strategy instruction* is an important component of building content understanding. Disciplinary literacy strategies are those practices that support students to do the types of reading, writing, speaking, and thinking specific to individual disciplines. As disciplines become more complex, the literacy demands of those disciplines become increasingly divergent.[19] For example, using *Instructional Tool 29, the Five-Step Mathematical Problem Solving Graphic Organizer* in mathematics can help support students in the type of linear, process-oriented thinking required in that content area.

In middle and high schools, educators often make the argument that English Language Arts or dedicated reading specialists should "handle" this instruction. However, both types of literacy instruction in Tier 1 are the responsibility of all content area teachers. English Language Arts is one of the content areas; as such, the disciplinary skills required for success are unique. Core literacy and language instruction works best when it is embedded within existing curricula, rather than undertaken in a decontextualized way as can be the case when students are "sent to" reading specialists or intervention classes within middle or high schools.[20,] To help students meet both foundational and disciplinary literacy demands, literacy strategy instruction of both types is best accomplished by those teachers with a thorough understanding of the discipline.

High impact strategies can be used to enhance skill development in many academic areas**.** Tables 5 and 6 provide two different ways to connect the tools in this section of the framework to the CCSS-ELA & Literacy. Table 6 organizes the tools according to the standards each tool addresses. Table 7 organizes the tools according to the instructional shift each tool supports.

[16] Carnegie Council on Advancing Adolescent Literacy. (2010). Time to act: An agenda for advancing adolescent literacy for college and career success. New York, NY: Carnegie Corporation of New York.

[17] Wood, K. D., Lapp, D., Flood, J., & Taylor, D. B. (2008). Guiding readers through text: Study guides in "new times" (2nd Ed.). New York: Guilford.

[18] Palincsar, A., & Brown, A. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction, 1, 117-175.

[19] Shanahan, T., & Shanahan, C. (2008). Teaching disciplinary literacy to adolescents: Rethinking content area literacy. Harvard Educational Review, 78(1), pp. 40–59.

[20] McConachie, S.M., & Petrovsky , A.R. (2010). Engaging content teachers in literacy development. In S. McConachie, & A. Petrosky (Eds.), *Content matters: A disciplinary literacy approach to improving student learning* (1–13). San Francisco, CA: Jossey-Bass.

Table 6. Instructional Tools by Corresponding CCSS-ELA & Literacy

CCSS-ELA & Literacy	Strategies																												
	Word Wall	Triple Entry Vocab. Journal	Word Analysis	Knowledge Rating Guide	Anticipation/Reaction Guide	Chapter Preview	Two- Column Notes	Paired Reading	Analytic Graphic Org.	Coding/Comp. Monitoring	Sum it Up	Give One Get One	QAR	Literature Circles	Text-based Fishbowl Discussion	Quick Writes	RAFT	Draft +1	Question the Author	Group Summarizing	Save the Last Word	Textbook Reading Strategy	Frayer Model	Proposition Support Outline	Semantic Feature Analysis	Word Sort	Science Word Journals	Five-Step Problem Solving	Math Journals
Reading 1: Read closely, make inferences, cite textual evidence					X	X	X	X	X	X	X	X		X	X				X	X	X	X		X	X	X			
Reading 2: Summarize key details and ideas, analyze and trace ideas							X	X	X	X	X	X	X	X	X	X				X			X	X				X	X
Reading 3: Analyze how events, characters, and ideas develop and interact							X	X	X	X	X			X	X				X	X									
Reading 4: Interpret language of text	X	X	X				X		X	X	X		X	X	X	X	X		X								X		
Reading 5: Analyze text structure, how parts relate to whole							X	X	X	X	X			X	X	X				X		X							
Reading 6: Assess how point of view shapes content and style							X		X	X	X	X	X	X	X	X	X		X					X					
Reading 7: Evaluate multimedia content					X		X		X					X	X	X	X		X										
Reading 8: Evaluate claims and evidence							X		X	X	X	X	X	X	X	X			X					X				X	
Reading 9: Analyze multiple texts, compare approaches to a topic							X		X	X		X		X	X	X			X										
Reading 10: Read variety of complex texts independently	X	X	X				X		X	X	X	X	X		X					X	X					X			
Writing 1: Write arguments to support claims									X			X				X	X	X						X	X				
Writing 2: Write explanatory texts to examine and convey ideas									X			X				X	X	X		X			X		X				
Writing 3: Write narratives to develop experiences or events									X			X				X	X	X											
Writing 4: Produce clear and coherent									X							X	X	X										X	

CCSS-ELA & Literacy	Strategies																												
	Word Wall	Triple Entry Vocab. Journal	Word Analysis	Knowledge Rating Guide	Anticipation/Reaction Guide	Chapter Preview	Two- Column Notes	Paired Reading	Analytic Graphic Org.	Coding/Comp. Monitoring	Sum it Up	Give One Get One	QAR	Literature Circles	Text-based Fishbowl Discussion	Quick Writes	RAFT	Draft +1	Question the Author	Group Summarizing	Save the Last Word	Textbook Reading Strategy	Frayer Model	Proposition Support Outline	Semantic Feature Analysis	Word Sort	Science Word Journals	Five-Step Problem Solving	Math Journals
writing																													
Writing 5: Revise, edit, and rework writing																X	X	X											
Writing 6: Use technology to produce and publish writing																X	X	X											
Writing 7: Conduct short and sustained research projects							X		X								X	X	X			X		X	X			X	
Writing 8: Gather information and assess credibility of sources											X						X	X											
Writing 9: Use evidence to support analysis, reflection, and research							X		X	X	X					X	X	X						X			X		
Writing 10: Write routinely for a range of purposes																X	X	X									X		X
S & L 1: Prepare for and participate in a range of conversations								X	X			X		X	X				X	X	X								
S & L 2: Integrate and evaluate information in different formats														X	X	X			X										
S & L 3: Evaluate speaker's point of view, reasoning, and evidence														X	X	X			X		X								
S & L 4: Orally present information clearly, in a way appropriate to the task								X	X					X	X					X	X								
S & L 5: Use media to express information and enhance understanding									X	X				X	X														
S & L 6: Adapt speech to variety of contexts, including using formal English								X						X	X					X	X								

CCSS-ELA & Literacy	Strategies																												
	Word Wall	Triple Entry Vocab. Journal	Word Analysis	Knowledge Rating Guide	Anticipation/Reaction Guide	Chapter Preview	Two- Column Notes	Paired Reading	Analytic Graphic Org.	Coding/Comp. Monitoring	Sum it Up	Give One Get One	QAR	Literature Circles	Text-based Fishbowl Discussion	Quick Writes	RAFT	Draft +1	Question the Author	Group Summarizing	Save the Last Word	Textbook Reading Strategy	Frayer Model	Proposition Support Outline	Semantic Feature Analysis	Word Sort	Science Word Journals	Five-Step Problem Solving	Math Journals
Language 1: Demonstrate command of grammar and usage	X	X	X							X						X	X	X								X			
Language 2: Demonstrate command mechanics																X	X	X											
Language 3: Apply knowledge of language	X	X	X				X	X	X	X				X	X	X	X	X	X	X	X					X			
Language 4: Determine meaning of unknown words and phrases	X	X	X	X	X	X	X			X																X			
Language 5: Demonstrate understanding of figurative language, word relationships, and nuances in meaning	X	X	X							X	X	X	X	X	X	X	X	X	X	X	X					X			
Language 6: Use a range of academic and domain-specific vocabulary	X	X	X				X			X	X				X	X	X	X			X	X	X	X		X			X

Table 7. Instruction Tools by CCSS-ELA & Literacy Instructional Shift

Instructional Tools	Building Knowledge Through Content-Rich Nonfiction	Utilizing Literacy Strategies and Building Knowledge in all Content Areas	Practicing Regularly with Complex Text and Its Academic Language	Reading, Writing, and Speaking Grounded in Evidence From Text, Both Literary and Informational
Foundational Literacy Strategies				
1. Literacy Rich Instructional Design Guide	X	X	X	X
2. Interactive Word Wall		X	X	
3. Triple-Entry Vocabulary Journal		X	X	
4. Word Analysis		X	X	
5. Knowledge Rating Guide	X	X	X	
6. Anticipation/Reaction Guide	X	X	X	X
7. Chapter Preview/Tour	X	X	X	
8. Two-Column Notes	X	X	X	
9. Paired Reading	X	X	X	X
10. Analytic Graphic Organizers	X	X	X	X
11. Coding/Comprehension Monitoring	X	X	X	
12. Sum it Up	X	X	X	X
13. Give One, Get One, Move On	X	X	X	
14. Question Answer Relationships (QAR)	X	X	X	X
15. Literature Circles		X	X	X
16. Text-based Fishbowl Discussion	X	X	X	X
17. Quick Writes	X	X		X
18. RAFT (Role, Audience, Format, Topic)		X		X

Instructional Tools	Building Knowledge Through Content-Rich Nonfiction	Utilizing Literacy Strategies and Building Knowledge in all Content Areas	Practicing Regularly with Complex Text and Its Academic Language	Reading, Writing, and Speaking Grounded in Evidence From Text, Both Literary and Informational
19. Draft + 1 Writing		X		X
Disciplinary Literacy Strategies				
20. Question the Author (QtA)	X		X	X
21. Group Summarizing	X	X	X	
22. Save the Last Word for Me		X	X	
23. Textbook Reading Strategy	X	X	X	
24. Frayer Model		X		X
25. Proposition Support Outline	X	X	X	X
26. Semantic Feature Analysis	X	X		X
27. Word Sort		X	X	
28. Science Word Journals	X	X	X	
29. Five-Step Mathematical Problem Solving	X	X	X	
30. Math Journals	X	X		X

3. Foundational Literacy Strategies

Both foundational and disciplinary strategies can be used to support literacy rich content instruction. While many literacy strategies work across contents, some are specific to a particular area. The description of these strategies that is presented here serves as a guide for teachers when planning literacy instruction. The templates at the conclusion of this section can provide additional support in implementing these strategies.

3.1 Building Rich Vocabulary

The CCSS-ELA & Literacy makes clear that academic vocabulary and language are critical components of college and career readiness. For this reason, all students require that corporations, schools, and teachers pay careful attention to vocabulary development. Vocabulary acquisition supports increased comprehension and develops a student's ability to communicate effectively in a variety of formats.[21,22] Helping students develop robust disciplinary vocabularies develops their capacity to read, write, discuss, present, and think in the language of that discipline. That is, students will be better equipped to speak as mathematicians, scientists, historians, artists, musicians, etc. Students use content language more effectively with ongoing, purposeful, and direct vocabulary instruction and practice.

> Vocabulary acquisition supports increased comprehension and develops a student's ability to communicate effectively in a variety of formats.

There are three tiers[23] of vocabulary that students need to learn and use in order to be effective disciplinary thinkers and communicators and to comprehend a variety of texts.[24] *Tier 1* words include common words students use in their everyday lives. These words are acquired at a high rate in the early years and taper off later as students learn more advanced and specific terminology. Examples of Tier 1 words include sight words, basic nouns, adjectives, and verbs. These are words students learn to communicate on a basic level, such as "book," "orange," and "run." There are more than 8,000 word families in this group, so English Learners (EL) often need additional support in this area as they develop their initial language skills. English native speakers should come to sixth grade with a developed Tier 1 vocabulary; however, continued support might be required for struggling readers.

Tier 2 words are considered academic vocabulary. These are high frequency words that occur across content areas. These words can also include ones with multiple meanings, used in a number of different

[21] Beck, I., McKeown, M., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York, NY: The Guilford Press.

[22] Hiebert, E. H., & Kamil, M. L. (Eds.) (2005). *Teaching and learning vocabulary: Bringing research to practice.* Mahwah, NJ: Lawrence Erlbaum Associates.

[23] The term "tier" in this context should not be confused with the "tiers" described in the Response to Instruction model.

[24] Beck, I., McKeown, M., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York, NY: The Guilford Press.

domains. There are approximately 7,000 Tier 2 word families. Many of these words appear in texts, on standardized tests, and within other school-based materials. Knowledge and use of Tier 2 words demonstrates mature language acquisition. Examples of Tier 2 words include "analyze," "interpret," "measure," "benevolent," and "masterpiece." These words tend to be more specific and descriptive in nature. English Learners acquire Tier 2 words later due to their intense focus on Tier 1 words. English native speakers should learn Tier 2 words early and use them often, since many of these words are seen in textbooks, content-based materials, and on important assessments.

Table 8. Three Tiers of Vocabulary

Three Tiers of Vocabulary		
Tier One	**Tier Two**	**Tier Three**
• Common words • Sight words • 8,000 word families	• Academic Vocabulary • Multiple meanings • Descriptive words • 7,000 word families	• Content specific • Occurs infrequently
Examples: Book, orange	**Examples**: Analyze, measure	**Examples**: Isotope, asphalt

Tier 3 words are content and context-specific, and therefore occur less frequently than the other two tiers. However, these words are important to learning new content in the academic subject areas, so teachers must provide direct instruction. Teachers can use vocabulary strategies to support word acquisition and use. Using the words in the correct context will help students to not only learn the new vocabulary, but also the content of the subject. English Learners often struggle with learning Tier 3 words due to the difficulty of the terms, lack of predictable patterns, and the specific nature of the content. Native English speakers can also struggle with learning Tier 3 words due to the limited exposure and use of the words. Teachers must provide frequent, meaningful opportunities for students to interact with and use these words.

It is particularly important for students to have multiple, meaningful exposures to new vocabulary words.

Students requiring targeted or intensive instruction will most likely require additional focused work on vocabulary acquisition. This will also aid and improve reading comprehension. The CCSS-ELA & Literacy rely on students knowing and using a variety of vocabulary words in both their spoken and written communications. In order to be successful with the CCSS-ELA & Literacy, students need to use mature, grade-appropriate terminology on a regular basis.

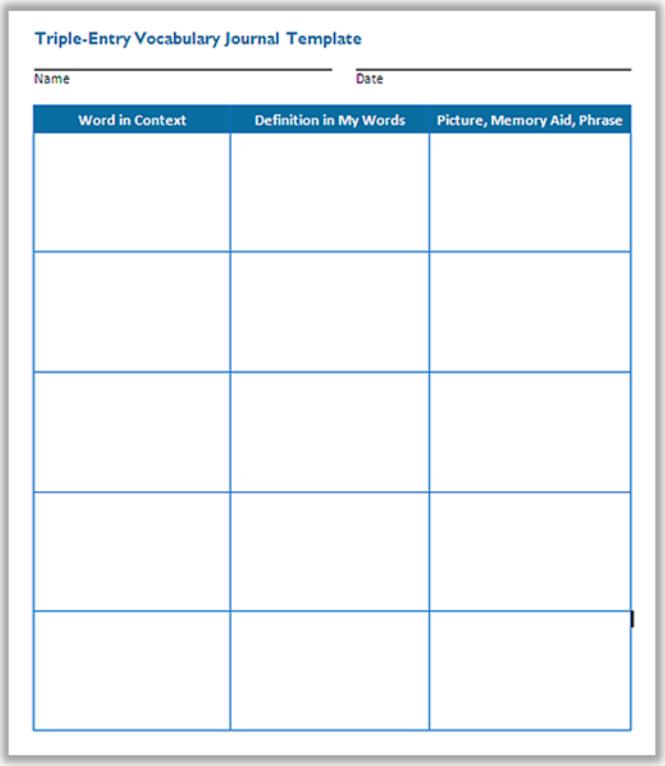
Vocabulary instruction is most powerful when it is integrated into regular practice with complex texts. Students need to see how a word is used, learn how it is used, and then use it themselves in context. This means that it is particularly important for students to have multiple, meaningful exposures to new

vocabulary words[25]. Increased exposure to words is especially important for struggling learners and for English Learners. These students are often behind in acquiring the necessary vocabulary terms due to limited experiences with print.

Explicit strategy instruction can help students to learn and use new vocabulary terms in a meaningful context. These strategies can be used in the content area classrooms to enhance the learning process. These methods can be used in conjunction with a piece of text or on their own, keeping in mind that students need to see the words used correctly in context. Teachers should plan instruction to include multiple practice opportunities.

The following tools can be used to support vocabulary development:

- *Instruction Tool 2: Interactive Word Wall*
- *Instruction Tool 3: Triple Entry Vocabulary Journal*
- *Instruction Tool 4: Word Analysis*



Triple-Entry Vocabulary Journal Template

Name _____ Date _____

Word in Context	Definition in My Words	Picture, Memory Aid, Phrase

Figure 5. ***Instruction Tool 3: Triple Entry Vocabulary Journal Template***

3.2 Improving Reading Comprehension

The CCSS-ELA & Literacy require that students work with increasingly complex texts in order to learn content from reading. [26,27,28] Because this shift from learning to read to reading to learn can be a difficult one for many students, it is an important teaching responsibility for educators. Teachers at this stage have two primary tasks. The first, of course, is to expose students to more complex texts in a variety of the genres they will encounter as they continue their schooling. However, exposure to such texts, although necessary, is not sufficient to build literacy capacity. As students encounter a wider range of

[25] Beck, I., McKeown, M., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York, NY: The Guilford Press.

[26] Carnegie Council on Advancing Adolescent Literacy. (2010). *Time to act: An agenda for advancing adolescent literacy for college and career success*. New York, NY: Carnegie Corporation of New York.

[27] Conley, M. (2008). Cognitive strategy instruction for adolescents: What we know about the promise, what we don't know about the potential. *Harvard Educational Review, 78*(1) 84–108.

[28] McConachie, S.M., & Petrovsky , A.R. (2010). Engaging content teachers in literacy development. In S. McConachie, & A. Petrosky (Eds.), *Content matters: A disciplinary literacy approach to improving student learning* (1–13). San Francisco, CA: Jossey-Bass.

genres and types of text, it is critical to provide students with direct instruction in how to learn from them.[29] The direct instruction in these disciplinary literacy skills impacts students' immediate content learning and their continued ability to learn from similar texts in the future.

A second critical need of adolescent learners is multiple modes of interaction with a text.[30,31]One common mistake educators make is to assume that the best way for a student to learn from reading is simply to read. While this is understandable, it does not consider the use of language and talk in the learning process. As social beings, people speak not only to communicate, but also to learn. Interaction with others around content is one of the most powerful ways for adolescents, particularly early adolescents, to develop content understanding. Through providing multiple modes of interaction, students experience, discuss, and connect to the text in a number of meaningful ways.

Interaction with others around content is one of the most powerful ways for adolescents, particularly early adolescents, to develop content understanding.

Students must understand a text if they are going to learn the content. Although this seems to be a fairly basic premise, it is not that simple. Comprehension begins *before* the text is read and continues *after* the actual reading is complete. To fully comprehend a text, therefore, students must view and engage in reading as a process. To support this view requires two things. First, comprehension instruction should occur at all grade levels and within every content area. Second, teachers should support comprehension by integrating purposeful, strategy-based instruction into the curriculum *before*, *during*, and *after* interaction with a text.[32]

[29] Conley, M. (2008). Cognitive strategy instruction for adolescents: What we know about the promise, what we don't know about the potential. *Harvard Educational Review, 78*(1) 84–108.

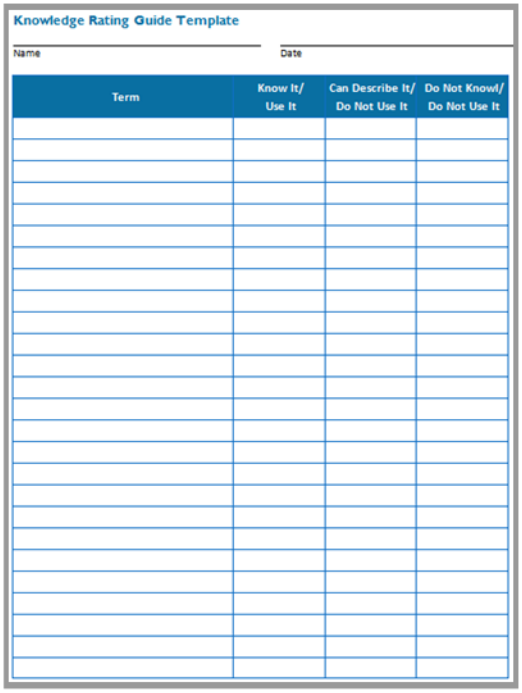
[30] Irvin, J.L., Meltzer, J., & Dukes, M.S. (2007) *Taking Action on Adolescent Literacy.* Alexandria, VA: Association for Supervision and Curriculum Development.

[31] Fisher, D., & Frey, N. (2008). What does it take to create skilled readers? Facilitating the transfer and application of literacy strategies. Voices in the Middle, 15(4), 16-22.

[32] Council of Chief State School Officers. (2007, August). *Content Area Literacy Guide*. Retrieved from http://www.ccsso.org/projects/secondary_school_redesign/Adolescent_Literacy_Toolkit/Resources_for_Teachers/Content_Area_Literacy_Guide/

Before Reading

The literacy research is clear that when students activate background knowledge about a given topic and set a purpose for reading before they begin a text, their comprehension of the overall piece increases.[33] This is particularly important given the focus of the CCSS-ELA & Literacy on the use of complex texts. Activating background knowledge helps students access more complex text in two ways. First, it helps them focus on the topic of instruction. At the same time, it helps students identify what they already know about that topic. This identification allows students to make predications and provides an anchor to which they can connect—and therefore retain—new learning. Purpose setting also supports comprehension in powerful ways. Having a reason to read a text helps organize students' thinking, gives them a lens through which to view a text, and helps keep them focused on the task. In this way, it can build reading stamina and support content learning. In order to use before reading strategies effectively to support comprehension, it is important to keep in mind the goal of building rich content understanding through interactions with text. A common mistake is to engage students in a general pre-reading conversation about a topic that fails to help students focus on the text. In order to be effective, before reading strategies must focus on preparing students to learn from what they are going to read.


Knowledge Rating Guide Template

Name _____ Date _____

Term	Know It/ Use It	Can Describe It/ Do Not Use It	Do Not Know/ Do Not Use It

Figure 6. ***Instruction Tool 5: Knowledge Rating Guide Template***

The following are some of the tools in this section of the Framework that support comprehension before reading. For others, see Table 6 and Table 7.

- *Instruction Tool 5: Knowledge Rating Guide*
- *Instruction Tool 6: Anticipation/Reaction Guide*
- *Instruction Tool 7: Chapter Preview/Tour*

During Reading

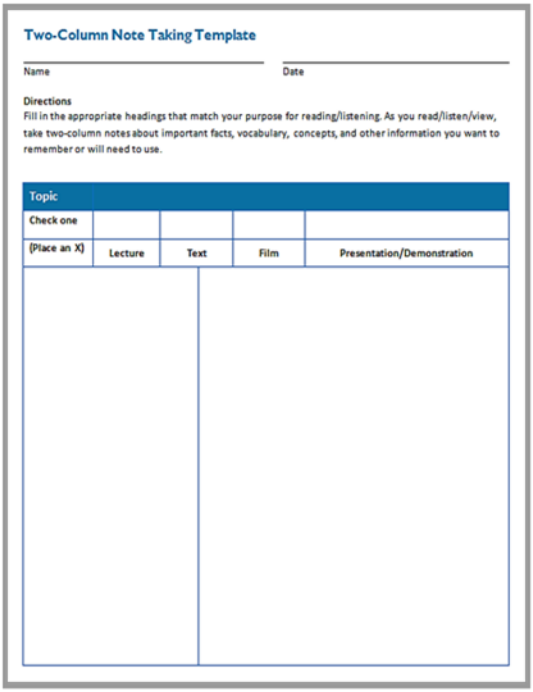
Activating background knowledge and setting a purpose for reading prepare students to enter into a text. It is important to remember, however, that *preparing for reading* should not take the place of *learning from reading*. The CCSS-ELA & Literacy emphasizes close examination of text; the strategies teachers should use, therefore, should help students engage with the text itself as well as support them through the reading process. This type of support can take a number of forms.

[33] Marzano, R. J. (2004). *Building background knowledge for academic achievement: Research on what works in schools*. Alexandria, VA: ASCD.

- Analytic graphic organizers can support students to analyze text structure.
- Comprehension monitoring strategies build metacognitive skills and support students to read closely and analyze themes over time.
- Note taking strategies help students access and retain textual information.

The following are some of the tools in this section of the Framework that support comprehension during reading. For others, see Table 6 and Table 7.

- *Instruction Tool 8: Two-Column Notes*
- *Instruction Tool 9: Paired Reading*
- *Instruction Tool 10: Analytic Graphic Organizers*
- *Instruction Tool 11: Coding/Comprehension Monitoring*


Two-Column Note Taking Template

Name Date

Directions
Fill in the appropriate headings that match your purpose for reading/listening. As you read/listen/view, take two-column notes about important facts, vocabulary, concepts, and other information you want to remember or will need to use.

Topic				
Check one				
(Place an X)	Lecture	Text	Film	Presentation/Demonstration

*Figure 7. **Instruction Tool 8: Two-Column Note Taking Template***

After Reading

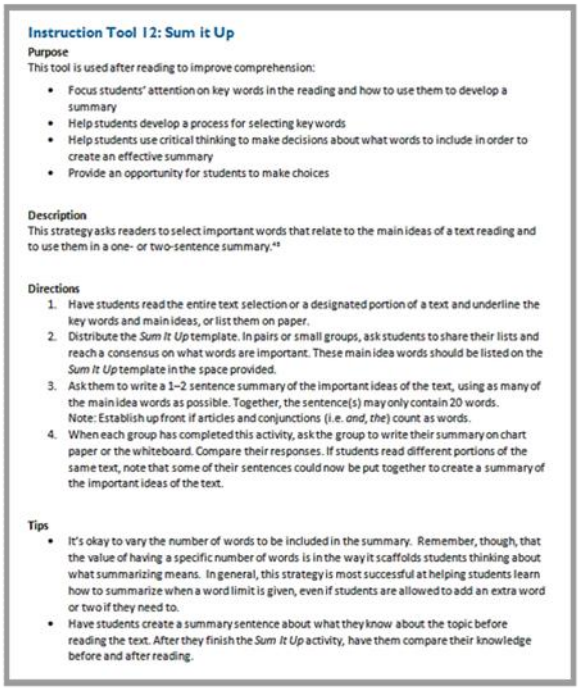
The reading process does not end when the text finishes. To comprehend effectively, students must also be able to consolidate their understanding and process it, either alone or in collaboration with others. This provides students with additional thinking about a topic, continues their exploration of a text, and helps them retain content information. To support this, teachers should structure opportunities for students to complete this important step in the reading process. This includes providing consistent ways to process and discuss the text, both orally and through written assignments and conversations:

- Summarizing strategies help students to process the text and select the most pertinent information to communicate to others. Students often struggle with writing accurate summaries, especially when the text is complicated or dense. Teaching students to write effective summaries is a powerful way to scaffold their comprehension of complex texts. This supports both comprehension and writing skills.
- Discussion collaborative routines help comprehension of complex text by engaging students in a structured, focused conversation with peers. Strategically employed, these routines have help students think deeply about text.
- Questioning strategies build a number of important skill sets. Students are often asked to answer questions about a piece of text to demonstrate their understanding of it. This helps students to identify what they may not understand and push their thinking about a concept further.

The following are some of the tools in this section of the Framework that support comprehension after reading. For others, see Table 6 and Table 7.

- *Instruction Tool 12: Sum it Up*
- *Instruction Tool 13: Give One, Get One, Move On*
- *Instruction Tool 14: Question Answer Relationships (QAR)*

Teaching comprehension is everyone's responsibility. It should therefore be a part of instruction in all content areas. Improving comprehension skills will allow students to access content more effectively and efficiently. It is important for all content area teachers to implement and regularly use purposeful strategies to support students' needs. This includes differentiating instruction as needed, in terms of content, process, and product.



Instruction Tool 12: Sum it Up

Purpose

This tool is used after reading to improve comprehension:

- Focus students' attention on key words in the reading and how to use them to develop a summary
- Help students develop a process for selecting key words
- Help students use critical thinking to make decisions about what words to include in order to create an effective summary
- Provide an opportunity for students to make choices

Description

This strategy asks readers to select important words that relate to the main ideas of a text reading and to use them in a one- or two-sentence summary.[48]

Directions

1. Have students read the entire text selection or a designated portion of a text and underline the key words and main ideas, or list them on paper.
2. Distribute the *Sum It Up* template. In pairs or small groups, ask students to share their lists and reach a consensus on what words are important. These main idea words should be listed on the *Sum It Up* template in the space provided.
3. Ask them to write a 1–2 sentence summary of the important ideas of the text, using as many of the main idea words as possible. Together, the sentence(s) may only contain 20 words. Note: Establish up front if articles and conjunctions (i.e. *and*, *the*) count as words.
4. When each group has completed this activity, ask the group to write their summary on chart paper or the whiteboard. Compare their responses. If students read different portions of the same text, note that some of their sentences could now be put together to create a summary of the important ideas of the text.

Tips

- It's okay to vary the number of words to be included in the summary. Remember, though, that the value of having a specific number of words is in the way it scaffolds students thinking about what summarizing means. In general, this strategy is most successful at helping students learn how to summarize when a word limit is given, even if students are allowed to add an extra word or two if they need to.
- Have students create a summary sentence about what they know about the topic before reading the text. After they finish the *Sum It Up* activity, have them compare their knowledge before and after reading.

Figure 8. Instruction Tool 12: Sum It Up Template

3.3 Improving Writing in the Content Areas

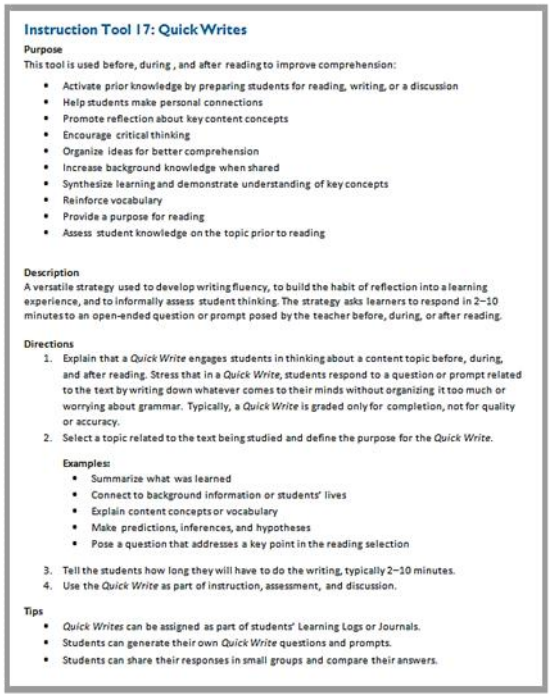
Research consistently supports the strong connection between reading and writing skills.[34] Specifically, when students engage in activities such as summarizing a piece of text, responding to text, taking notes, and answering questions about a text, then their comprehension is positively impacted. In addition to supporting reading comprehension, however, writing has its own set of standards students must reach to become college and career ready.

The CCSS-ELA & Literacy require that students develop proficiency in three specific types of writing; Argument, Expository, and Narrative. Each type of requires a unique set of foundational and disciplinary skills to master. Writing in the sciences, for example, is very different from writing in English language arts. Both differ dramatically from the kinds of writing technical subjects demand. To ensure all students can write at a level that prepares them for college and careers, the CCSS-ELA & Literacy emphasize writing regularly, in a variety of forms, for a variety of audiences. At the same time, the instructional shift that emphasizes the use of evidence from text requires corporations and schools to take a careful look both at how to increase the amount of writing students do and how to improve students' ability to

[34] Graham, S., & Hebert, M. A. (2010). *Writing to read: Evidence for how writing can improve reading. A Carnegie Corporation Time to Act Report*. Washington, DC: Alliance for Excellent Education. Retrieved from: http://carnegie.org/fileadmin/Media/Publications/WritingToRead_01.pdf

support their claims with textual evidence. There are a wide variety of strategies teachers can use to build writing skills.

- Quick write strategies can help increase both the frequency of writing in content classrooms and the acquisition of content. These strategies provide a classroom structure for building writing into a weekly or daily routine.
- Graphic organizers and analytic frames support writing in two ways. They can provide a structured way for students to use writing to think about text. They can also function as a tool for helping students draft and revise their writing.
- Revising strategies help students learn how to craft a piece of writing beyond what normally takes place during quick writes or open response questions. These strategies help students learn to consider different aspects of a piece of writing and focus their attention on their work in different ways.



Instruction Tool 17: Quick Writes

Purpose

This tool is used before, during , and after reading to improve comprehension:

- Activate prior knowledge by preparing students for reading, writing, or a discussion
- Help students make personal connections
- Promote reflection about key content concepts
- Encourage critical thinking
- Organize ideas for better comprehension
- Increase background knowledge when shared
- Synthesize learning and demonstrate understanding of key concepts
- Reinforce vocabulary
- Provide a purpose for reading
- Assess student knowledge on the topic prior to reading

Description

A versatile strategy used to develop writing fluency, to build the habit of reflection into a learning experience, and to informally assess student thinking. The strategy asks learners to respond in 2–10 minutes to an open-ended question or prompt posed by the teacher before, during, or after reading.

Directions

1. Explain that a *Quick Write* engages students in thinking about a content topic before, during, and after reading. Stress that in a *Quick Write*, students respond to a question or prompt related to the text by writing down whatever comes to their minds without organizing it too much or worrying about grammar. Typically, a *Quick Write* is graded only for completion, not for quality or accuracy.
2. Select a topic related to the text being studied and define the purpose for the *Quick Write*.

   Examples:
   - Summarize what was learned
   - Connect to background information or students' lives
   - Explain content concepts or vocabulary
   - Make predictions, inferences, and hypotheses
   - Pose a question that addresses a key point in the reading selection
3. Tell the students how long they will have to do the writing, typically 2–10 minutes.
4. Use the *Quick Write* as part of instruction, assessment, and discussion.

Tips

- *Quick Writes* can be assigned as part of students' Learning Logs or Journals.
- Students can generate their own *Quick Write* questions and prompts.
- Students can share their responses in small groups and compare their answers.

*Figure 9. **Instruction Tool 17: Quick Writes***

The following are some of the tools in this section of the Framework that support writing development. For others, see Table 6 and Table 7.

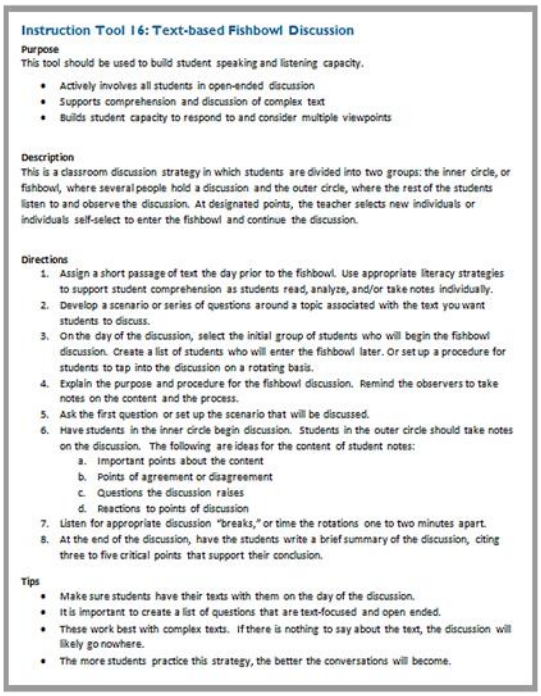
- *Instruction Tool 17: Quick Writes*
- *Instruction Tool 18: RAFT*
- *Instruction Tool 19: Draft +1 Writing*

Including writing opportunities in all content areas will help students to acquire deep content understanding. Students benefit the most when teachers work together to collectively promote high impact strategies in all content area classes. To help students meet the CCSS-ELA & Literacy, it will be important for schools and corporations to consider how to increase both the quantity and quality of student writing in all content areas.

3.4 Improving Speaking and Listening Skills

The CCSS-ELA & Literacy acknowledges the importance of developing speaking and listening skills. In addition to being important in their own right, they are also tied to improved text comprehension. [35; 36] It motivates students to read other books, promoting a positive social culture focused on literacy.[37] Part of developing disciplinary expertise is developing the ability to communicate effectively in the language of that discipline. For students to learn this skill, corporations and schools must provide them with regular opportunities to engage in academic dialogue, in a variety of forms and settings. This includes providing opportunities for students

There are several approaches teachers can take to provide students with high quality opportunities to talk with one another about text. A variety of collaborative routines can help students develop an understanding of the types and forms of academic discourse common to a specific discipline. By practicing conversation according to a prescribed set of rules, students get the opportunity to discuss content, support their opinions with evidence, and consider a variety of viewpoints.



Instruction Tool 16: Text-based Fishbowl Discussion

Purpose

This tool should be used to build student speaking and listening capacity.

- Actively involves all students in open-ended discussion
- Supports comprehension and discussion of complex text
- Builds student capacity to respond to and consider multiple viewpoints

Description

This is a classroom discussion strategy in which students are divided into two groups: the inner circle, or fishbowl, where several people hold a discussion and the outer circle, where the rest of the students listen to and observe the discussion. At designated points, the teacher selects new individuals or individuals self-select to enter the fishbowl and continue the discussion.

Directions

1. Assign a short passage of text the day prior to the fishbowl. Use appropriate literacy strategies to support student comprehension as students read, analyze, and/or take notes individually.
2. Develop a scenario or series of questions around a topic associated with the text you want students to discuss.
3. On the day of the discussion, select the initial group of students who will begin the fishbowl discussion. Create a list of students who will enter the fishbowl later. Or set up a procedure for students to tap into the discussion on a rotating basis.
4. Explain the purpose and procedure for the fishbowl discussion. Remind the observers to take notes on the content and the process.
5. Ask the first question or set up the scenario that will be discussed.
6. Have students in the inner circle begin discussion. Students in the outer circle should take notes on the discussion. The following are ideas for the content of student notes:
   a. Important points about the content
   b. Points of agreement or disagreement
   c. Questions the discussion raises
   d. Reactions to points of discussion
7. Listen for appropriate discussion "breaks," or time the rotations one to two minutes apart.
8. At the end of the discussion, have the students write a brief summary of the discussion, citing three to five critical points that support their conclusion.

Tips

- Make sure students have their texts with them on the day of the discussion.
- It is important to create a list of questions that are text-focused and open ended.
- These work best with complex texts. If there is nothing to say about the text, the discussion will likely go nowhere.
- The more students practice this strategy, the better the conversations will become.

Figure 10. Instruction Tool 16: Text-based Fishbowl Discussion

The following are some of the tools in this section of the Framework that support speaking and listening in the classroom. For others, see Table 6 and Table 7.

- *Instruction Tool 15: Literature Circles*
- *Instruction Tool 16: Text-based Fishbowl Discussion*

[35] Michaels, S., O'Connor, C., & Resnick, L. (2008). Reasoned Participation: Accountable Talk in the Classroom and in Civic Life. Studies in Philosophy and Education. 27 (4): 283-297.

[36] Resnick, L. B., Michaels, S., & O'Connor, C. (2010). How (well structured) talk builds the mind. In R. Sternberg & D. Preiss (Eds.), *From genes to context: New discoveries about learning from educational research and their applications*. New York: Springer.

[37] Carrington, V., & Luke, A. (1997). Literacy and Bourdieu's sociological theory: A reframing. *Language and Education, 11*(2), 96–112.

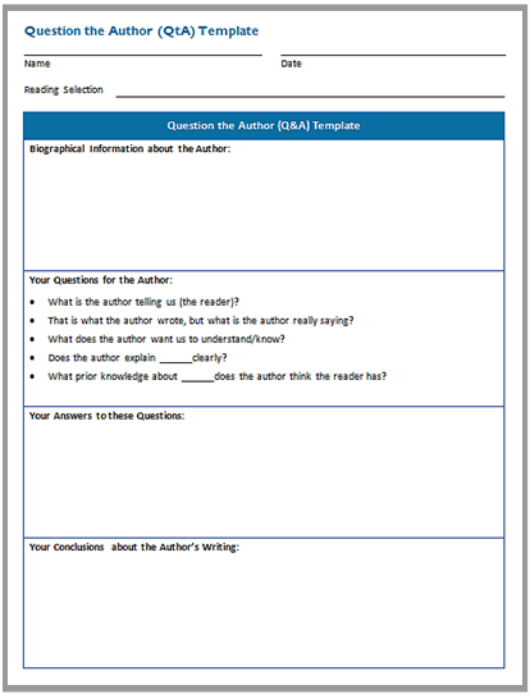
4. Disciplinary Literacy Strategies

Foundational literacy strategies support content acquisition across multiple disciplines. However, for students in grades 6–12, coursework, vocabulary, and text structures become increasingly specialized. The advanced ways of reading, writing, and thinking within individual disciplines begin to diverge. For example, the thinking required to compare the characters of Romeo and Tybalt is markedly different than that required to compare the usefulness of three different ways of solving quadratic equations.

Indiana students can acquire more advanced disciplinary literacy skills when educators recognize and strategically address the unique literacy demands of different contents. Using common strategies within each discipline encourages consistency and skill development in each content area. The literacy team can assist teachers within each department to select the most appropriate strategies for their students and for the specific needs of the discipline.

4.1 English/Language Arts

The discipline of English language arts is heavily dependent on interpretive and inferential thinking. Although the narrative structure of a story is something most students are familiar with, literary analysis involves the capacity to track multiple narratives through a text and to draw connections in a nonlinear fashion. Students examine a number of diverse, complex texts within the secondary English/language arts classroom. From author biographies and memoirs, to novels, short stories, plays and poetry, students will read a variety of texts throughout their 6–12 school careers. Vocabulary in the ELA classroom includes metaphorical and figurative language that requires students to connect highly disparate elements in order to analyze and synthesize information effectively. Students will need to use specific strategies to address literary and textual analysis, as well as increasingly complex vocabulary and figurative language. Several tools in this section focus on building skills that are heavily utilized in the English language arts classroom. *Instruction Tool 20: Question the Author (QtA)* encourages students to consider an author's message, point of view, and/or analysis within the text. The students consider the author's background, writing style, and evidence within the text to form their conclusions. This is especially useful when completing literary analysis, using a difficult or challenging text. *Instruction Tool 21: Group Summarizing* asks students to determine the main idea and supporting details within the text, and agree upon a group version of the summary. This challenges students to be concise, which can be difficult when using a lengthy piece of text. Finally, *Instruction Tool 22: Save the Last Word for Me* focuses on the identification and use of quotes from a piece of text.



Question the Author (QtA) Template

Name _____ Date _____

Reading Selection _____

Question the Author (Q&A) Template

Biographical Information about the Author:

Your Questions for the Author:

- What is the author telling us (the reader)?
- That is what the author wrote, but what is the author really saying?
- What does the author want us to understand/know?
- Does the author explain _____clearly?
- What prior knowledge about _____does the author think the reader has?

Your Answers to these Questions:

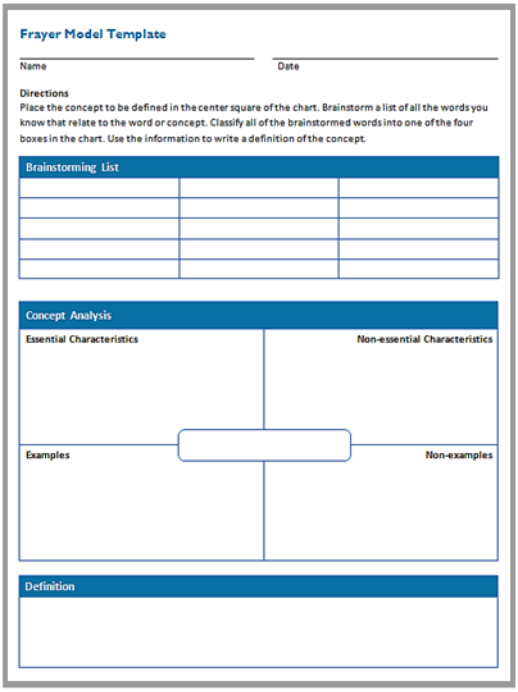
Your Conclusions about the Author's Writing:

Figure 11. Instruction Tool 20: Question

Within the English classroom, students are often asked to support their ideas with direct quotes from the text. This strategy allows students to select and organize the most relevant quotes for use in future assignments.

4.2 Social Studies/History/Humanities

The use of primary documents, nonfiction articles, textbooks, and other historical documents in the social studies/history classroom poses unique needs for students and educators. Research demonstrates that students often struggle with comprehending nonfiction texts, especially textbooks.[38,39] The variety of text sources commonly utilized in these disciplines requires students to anticipate and understand multiple text structures in order to access the content. The structures vary greatly from source to source, which challenges many students, especially struggling readers. In addition, textbooks often introduce complex, Tier 3 vocabulary terms. In order to fully access the content within these resources, students need high impact strategies to support their learning. The strategies included in this section aid students as they navigate the complex demands of these texts. *Instruction Tool 23: Textbook Reading Strategy* is a six-step method, which includes support before, during, and after the reading process. It is a systematic way of approaching a piece of text. *Instruction Tool 24: Frayer Model* builds students capacity to make sense of the abstract concepts endemic to these disciplines. It asks students to brainstorm essential characteristics versus non-essential characteristics, and then complete their own definition of the term or concept based on their findings. The word sort template asks students to carefully consider and categorize content specific vocabulary. Finally, *Instruction Tool 25: Proposition Support Outline* guides students to gather facts, resources, and examples from multiple sources, while drawing their own conclusions.


Frayer Model Template

Name Date

Directions
Place the concept to be defined in the center square of the chart. Brainstorm a list of all the words you know that relate to the word or concept. Classify all of the brainstormed words into one of the four boxes in the chart. Use the information to write a definition of the concept.

Brainstorming List

Concept Analysis

Essential Characteristics | Non-essential Characteristics

Examples | Non-examples

Definition

Figure 12. Instruction Tool 24: Frayer Model Template

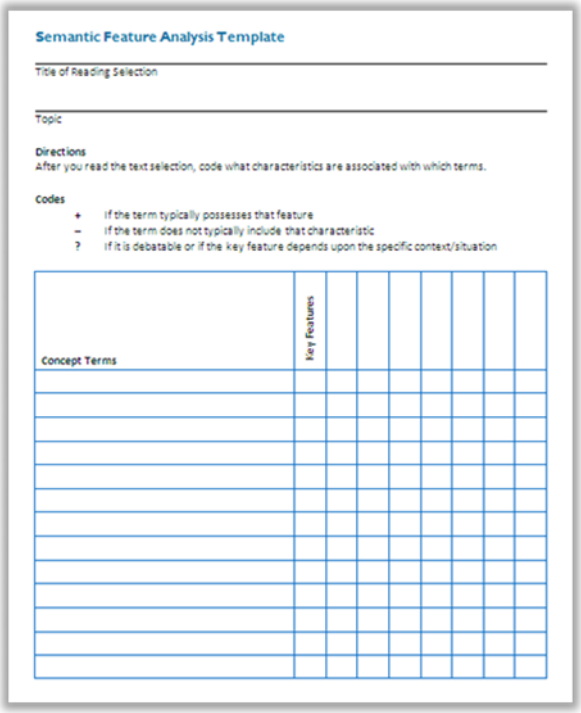
[38] Bluestein, N. (2010, April). Unlocking Text Features for Determining Importance in Expository Text: A Strategy for Struggling Readers. The Reading Teacher, 63(7), 597–600.

[39] Lapp, D., Fisher, D., & Grant, M. (2008, February). "You Can Read This Text—I'll Show You How": Interactive Comprehension Instruction. Journal of Adolescent & Adult Literacy, 51(5), 372–383.

4.3 Science/Agriculture

Scientific disciplines depend heavily on both inductive and deductive reasoning, the precise application of the scientific method as a way of knowing the world, and the ability to learn from dense, concise text.

Within the science classroom, students are asked to read multiple texts, including textbooks with diagrams and charts, detailed lab reports, and complex scientific studies. These types of text generally lack the narrative "story" structure which students are most familiar. Without this content, students must find alternative ways to acquire, process, and analyze new information from the texts, and draw their own conclusions based on their findings.


Semantic Feature Analysis Template

Title of Reading Selection

Topic

Directions
After you read the text selection, code what characteristics are associated with which terms.

Codes
+ If the term typically possesses that feature
– If the term does not typically include that characteristic
? If it is debatable or if the key feature depends upon the specific context/situation

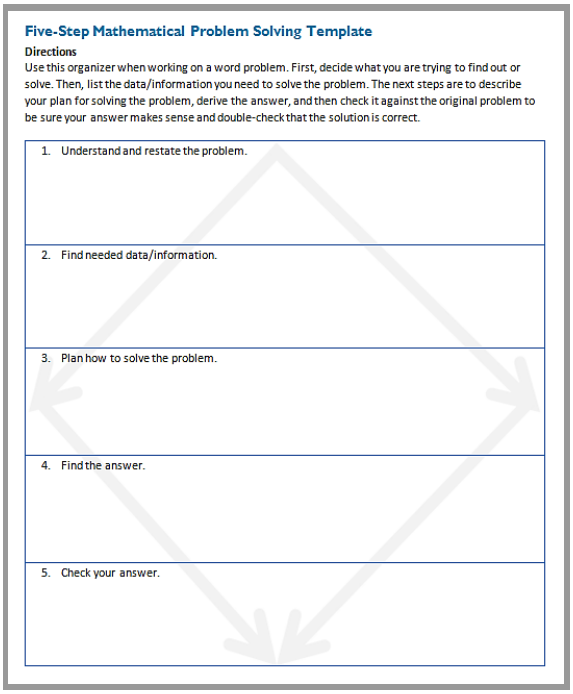
Concept Terms	Key Features							

*Figure 132. **Semantic Feature Analysis***

These are difficult and complex skills, so students need a range of strategies for support throughout the process**.** *Instruction Tool 26: Semantic Feature Analysis* asks students to focus on certain terms or concepts, comparing them by examining specific features of each. This works well with many scientific concepts and species introduced at the secondary level. *Instruction Tool 27: Word Sort* develops students' ability to make sense of the large numbers of complex vocabulary common to science classrooms by engaging them in classifying groups of these terms. *Instruction Tool 28: Science Word Journals* encourages students to identify new or unknown vocabulary terms in a science journal. Within the journal, students keep track of the words, how they are used in context, students use the word in a context specific sentence, and they draw a picture or a symbol of the word as a reminder. When students use a journal word, they record the new sentence in their journal as well. Students can be asked to share their words with the class or with a small group. This increases the number of content specific terms students can learn and retain throughout a unit or lesson.

4.4 Mathematics /Business/Technology

Obviously, mathematics requires a strong sense of numeracy as well as the ability to learn from extremely dense text. However, because mathematics constitutes a language through which mathematicians view the world, the discipline has much in common with world language courses. To learn the language effectively requires students to engage in constant translation of terms from number, to picture, to word, and back again. Academic vocabulary in mathematics—words like proof, solve, and evaluate—have meanings that contrast sharply with those of virtually all other disciplines.



Five-Step Mathematical Problem Solving Template

Directions

Use this organizer when working on a word problem. First, decide what you are trying to find out or solve. Then, list the data/information you need to solve the problem. The next steps are to describe your plan for solving the problem, derive the answer, and then check it against the original problem to be sure your answer makes sense and double-check that the solution is correct.

1. Understand and restate the problem.
2. Find needed data/information.
3. Plan how to solve the problem.
4. Find the answer.
5. Check your answer.

*Figure 12. **Instruction Tool 29: Five-Step Problem Solving Template***

Math relies heavily on both spatial and linear thinking, depending on the field, and requires practitioners to be adept and identifying and classifying patterns. The textbook is often the primary text used in the mathematics classroom, and in it students are frequently required to analyze and interpret graphs, charts, diagrams, and statistics. Without strong comprehension skills, students will struggle to understand word problems, directions, and examples provided in the text.

Instruction Tool 29: Five-Step Problem Solving first asks students to examine the problem and to restate it in their own words. The protocol then walks students through the process of planning to solve, solving, and checking their answers for each problem. This tool supports each stage of solving the problem. *Instruction Tool 30: Math Journals*, encourages students to write about mathematics. This includes problem solving, learning new terms, drawing, and explaining graphs. Teachers use a daily or weekly prompt to guide student writing in the journals. The journals can serve as a formative assessment and can be monitored for progress and used to drive the instruction process.

4.5 Fine & Performing Arts / World Language/ Physical Education & Health / Technical Education

Students should also read and write in classes such as fine and performing arts, physical education and health, and technical education. Teachers can use many of the cross content literacy strategies to support the literacy needs of students within these classes. The strategies can be adapted to meet the individual needs of the content area, including reading a variety of texts, learning new vocabulary words, and communicating ideas and concepts. *Instruction Tool 13: Give One, Get One, Move On* is especially useful as a review strategy in these areas. In technical education courses that require multiple exposures

to concepts or vocabulary, this tool can improve student retention. *Instruction Tool 17: Quick Writes* is a versatile teacher practice that can support students to process information in multiple ways and is useful for all subjects. *Instruction Tool 20: Question the Author (QtA)* is helpful in the fine and performing arts as a support for the analysis of art and performances. Because it is a powerful way to build concept understanding, *Instruction Tool 24: Frayer Model* can be used in all of these content areas as well. It is most helpful for helping students build an in-depth understanding of complex ideas. Table 8 lists concepts that lend themselves to the Frayer Model in these content areas:

Table 9. Sample Frayer Model Topics

Content Area	Sample Frayer Model Topics
Fine and Performing Arts	• Art • Plays • Dadaism (or other art movement)
Physical Education	• Sports • Games • Exercise
Career and Technical Subjects	• Systems • Language • Machine
World Language	• Language • Culture • Grammar

Instruction Tool 26: Semantic Feature Analysis is an effective way to help students learn how to analyze and compare multiple characteristics. Students in career and technical courses, for instance, could use this tool to analyze computer languages, types of engines, architects. Art students could compare types of plays, different artists within a movement, types of painting or anything else that can be categorized. Finally, *Instruction Tool 29: Five-Step Mathematical Problem Solving* is a powerful way to help students break down problems and pose and test approaches to solving them. This makes this tool especially helpful any time a student must design something, plan a piece of art, or build something. Although there are many other tools in this section of the Framework that can be used here, these lend themselves particularly well to the kinesthetic and hands-on work of these courses.

5. Provide Additional Targeted (Tier 2) or Intensive (Tier 3) Instruction

Effective core instruction that includes carefully designed curriculum and differentiated instruction should be the school or corporation's first approach to ensuring all of Indiana's students achieve. Instruction that meets the needs of at least 80% of learners is the goal for Tier 1 instruction. Part of the Response to Instruction model, however, is the inclusion of additional targeted or intensive instruction for struggling and advanced learners who cannot achieve appropriate growth with only access to core curriculum and instruction.

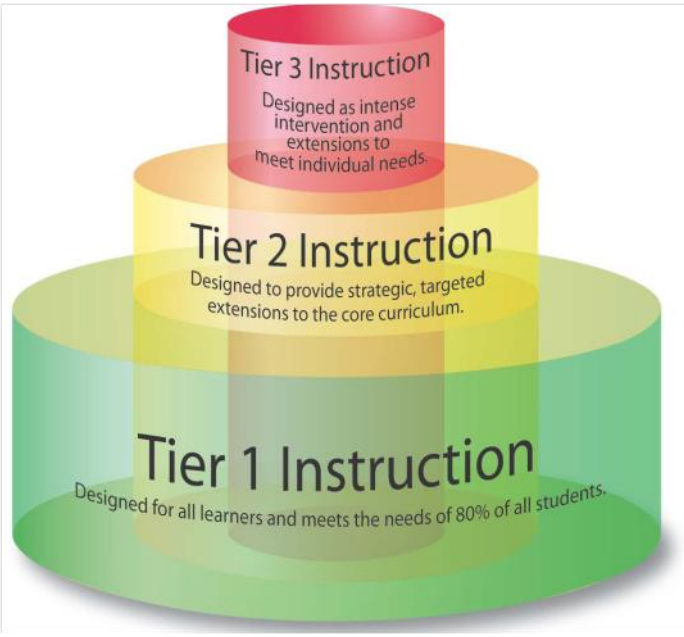


Figure 14. Indiana's Response to Instruction Model

Learners who do not respond to Tier 1 differentiated instruction should receive additional support with Tier 2 or Tier 3 instruction. Tiers of instruction are defined with respect to factors of intensity such as the frequency of instruction, the size of the group, the explicitness of instructional strategies, the amount of time provided for additional instruction, and the qualifications of educators who work with students who need more intensive support.

Tier 2 Instruction should generally be provided in content classrooms through increased differentiation or the introduction of supplementary literacy interventions. At times, students who require Tier 2 instruction may attend a supplemental reading course that focuses on accelerated learning of foundational literacy skills as well as skills targeted to disciplinary literacy. For students who require more intensive support, Tier 3 instruction provides more intervention, with greater frequency, and increased specialization. This instruction should take place in addition to Tier 1 instruction, but may supplant Tier 2 instruction. As the *Response to Instruction Foundations for Implementation* document notes, this tier of instruction may include individually designed lessons and learning goals. In order to be effective, Tier 3 instruction must be highly individualized, intense, ongoing, and purposeful. It may require individualized instruction or a specific intensive intervention course. Struggling learners identified as requiring Tier 2 or Tier 3 support should receive an additional 30 to 90 minutes of targeted literacy instruction on a daily basis; advanced learners may require adjustments to their curriculum course offerings, or requirements.

> Tier 3 instruction must be highly individualized, intense, ongoing, and purposeful.

The following principles provide a coherent approach to providing Tiers 2 and 3 instruction. It is important to remember, however, Tier 2 or Tier 3 instruction is in addition to Tier 1 instruction, rather than in its place:

- Use appropriately complex, high interest texts that provide access to content and builds reading confidence and stamina
- Provide additional, small group or individualized regular explicit instruction in foundational literacy strategies that support decoding, comprehension, fluency, and vocabulary, including advanced word work, as indicated by assessment data
- Scaffold instruction to support students to comprehend more complex texts
- Provide additional, regular opportunities to read, write, and engage in critical thinking.

5.1 Use Appropriately Complex Texts

If a solid core instructional program is in place, this aspect of Tiers 2 and 3 instruction focuses on providing content texts at a variety of reading levels to meet the literacy needs of all learners.[40] This component has two goals:

- Provide students with texts with which they can effectively access content
- Provide additional scaffolding to support students to read more complex texts

Students must be able to read at least 90% of the words in a text to be able to learn from it effectively.

Providing students with texts that are appropriately complex for their reading level helps both struggling and advanced learners access the content of the curriculum effectively. Texts that are neither too easy nor too hard for students are beneficial for several reasons. First, students must be able to read at least 90% of the words in a text to be able to learn from it effectively.[41] At the same time, "just right" texts build reading confidence, since, by definition, they are neither too difficult for more struggling learners to comprehend nor to simple to bore more advanced learners. They provide the opportunity for students to have success with a text. This increases the motivation to read more while providing reading practice, both of which learners receiving this tier of instruction need.

The Connection between Task Complexity and Text Complexity

[40] Hoffman, J., Roser, N., Salas, R., Patterson, E., & Pennington, J. (2000). *Text leveling and little books in first grade reading* (No. CIERA-R-1-010). Ann Arbor, MI: CIERA.

[41] Hirsch, E. D. (2003, Spring). Reading comprehension requires knowledge – of words and the world: Scientific insights into the fourth-grade slump and the nation's stagnant comprehension scores. *American Educator*. Washington, D.C.: American Federation of Teachers.

Although this notion is discussed with respect to core instruction, the idea becomes even more important for targeted or intensive instruction. A common mistake teachers make with struggling readers in particular is to try to make everything simpler when they provide a less complex text for a student. This deprives a student of the opportunity to do the high level thinking required in middle and high schools to understand content. A better approach is to balance the complexity of the cognitive task with the complexity of the text. Figure 15illustrates this relationship.

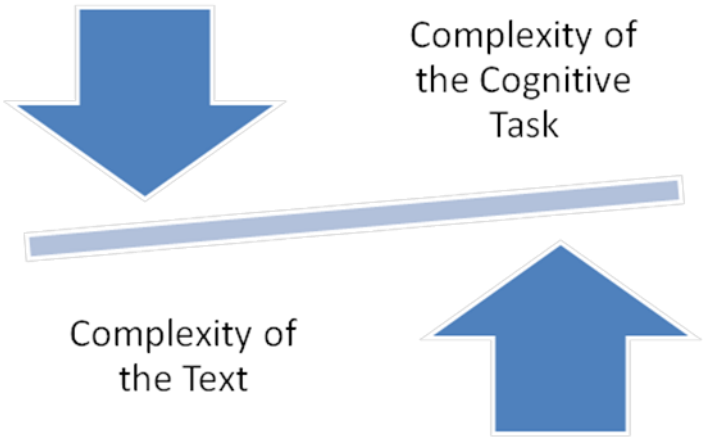


Figure 15. Text-Task Connection

A good rule of thumb here is the harder the text is for a student to comprehend, the simpler the learning task required of the text should be. In the same way, the easier the text, the more complex the task can be. If students must spend considerable cognitive effort to comprehend a text, there is little reserve for an additional difficult cognitive task. If, on the other hand, the text is easy to comprehend, it is appropriate—in fact, it's important—to provide students with opportunities to engage in higher order thinking about the content.

5.2 Provide Additional Instruction in Literacy Skills

Tier 2 and Tier 3 levels of instruction target students requiring extra support to meet their achievement goals. There are three areas of literacy instruction that should receive the most attention for students in grades 6-12:

1) Comprehension
2) Vocabulary
3) Fluency

One important area of Tier 2 and Tier 3 literacy instruction is comprehension. For struggling learners, this may include increased explicit instruction in literacy strategies that support comprehension. For advanced learners, this may mean helping those students identify appropriately challenging texts. Tier 2 and Tier 3 vocabulary instruction for both struggling and advanced learners should include an identification of the academic or content specific vocabulary the learners need and appropriate instruction in strategies that support the learning of that vocabulary. Interestingly, the connection between fluency and comprehension for students in grades 6–12 is currently unclear. Recent research suggests that increases in fluency scores for middle and high school students do not translate into improvements in comprehension, suggesting a more complex set of relationships among the aspects of literacy than those generally considered to affect comprehension in younger students.[42] However, for learners with severe reading disabilities, particularly those in earlier grades, supplemental, intensive fluency instruction may be appropriate and should be delivered by trained interventionists.

In middle and high schools, students may require additional instruction in these areas daily. In-class approaches may include increased use of flexible grouping and individual instruction. Targeted or intensive instruction may also take place during an intervention or lab class. The materials used during these targeted sessions should directly address the needs identified through the assessment process. The following are some approaches middle and high schools have used to provide targeted and intensive instruction for students:

- Intervention courses
- School-wide literacy “labs”
- Intervention programs or approaches such as Read 180 or Great Books
- Advanced literacy labs
- Enrichment opportunities for advanced learners

[42] Spencer, S. A. and Manis, F. R. (2010), The effects of a fluency intervention program on the fluency and comprehension outcomes of middle-school students with severe reading deficits. Learning Disabilities Research & Practice, 25: 76–86.

5.3 Scaffold Instruction by Layering Strategies

Although providing appropriate complex texts for students is important, the CCSS-ELA & Literacy makes clear that it is equally important to scaffold students up to more, complex texts. Layering the comprehension strategies described for Tier 1 instruction can be a powerful way to do this. It is important to remember here that "tiers" are relative to the achievement of an entire class. For example, 80% of students might be able to comprehend a given text using just two column notes. In this case, *Instruction Tool 8: Two Column Notes* is an appropriate Tier 1 strategy. For Tiers 2 or 3, a targeted instructional strategy might be to add, for certain students, analytic graphic organizers to support the comprehension of that text. Figure 4 provides some suggested strategies to layer, depending on students' needs.

Table 10. Suggested Layering Strategies

Students Who Need Additional Support in the Area of …	Might Benefit from…
Understanding structures of nonfiction texts	• Analytic graphic organizers
Monitoring their comprehension	• Coding • Quick Writes • Anticipation/Reaction Guides
Identifying important concepts	• Sum It Up • Chapter Previews • Paired Reading
Making connections	• Coding • Anticipation/Reaction Guides • Quick Writes
Learning new vocabulary	• Word Sorts • Triple/Entry Vocabulary Journals

6. Summary

Providing effective instruction to help students achieve the CCSS-ELA & Literacy requires the coordinated effort of corporations and schools. Because students in grades 6–12 must use literacy skills to acquire content, it is particularly important to ensure that all teachers make disciplinary literacy their responsibility. In keeping with Indiana's Response to Instruction model, corporations and schools have two primary responsibilities to students with respect to literacy. The first is to provide effective core (Tier 1) disciplinary literacy instruction for all students in every content area. The second is to provide additional targeted (Tier 2) or intensive (Tier 3) literacy instruction to students for whom Tier 1 instruction is inadequate or ineffective.

Providing quality Tier 1 instruction involves providing students with regular access to appropriately complex text, creating content-rich, literacy-rich curriculum, and explicitly teaching strategies that support achievement in reading, writing, speaking and listening, and language. To that end, CCSS-ELA & Literacy provide concise descriptions of what students should be able to do in each of these areas when they leave Indiana schools. This set of standards includes several important instructional shifts: an emphasis on informational text, literacy standards for all content areas, a focus on complex text, and a focus on argumentative writing. This requires content area teachers to differentiate instruction for all learners. Providing quality Tier 2 and Tier 3 instruction may involve additional instruction, interventions, layering of strategies, or the adjustment of texts or assignments. It is important to remember, however, that the goal is for all of Indiana's students to have access to the core curriculum.

Implementing this section of the Framework will help ensure that all Indiana's students are able to read, write, think, and communicate effectively in a variety of disciplines, for a variety of purposes, and to a variety of audiences.

7. Tools and Templates

Instruction Tool 1: Literacy Rich Instructional Design Guide

Purpose

This tool can be used by individual teachers or literacy teams to plan content-rich, literacy-rich instruction. Teachers can use the template to plan new individual lessons within larger units, or redesign existing lessons. Teams can use it either to plan model lessons or to better understand what literacy strategies look like at different points in a lesson.

Description

This is a sample lesson plan template, with space to plan instruction that purposefully embeds literacy strategies before, during, and after reading.

Directions

1. With existing curriculum, identify the CCSS-ELA & Literacy and assessments associated with the content. Enter these in the appropriate spaces.
2. Isolate the text for the lesson. Is this a written text? A video? A website? A performance?
3. Think about the types of thinking the assessment requires of students. Do students need to be able to summarize something, make arguments, compare and contrast, analyze, synthesize?
4. Identify how you might be able to use the lesson to help students acquire the thinking skills you isolated in Step 3.
5. Consider what supports and literacy strategies may help students before, during, and after their interaction with the text and enter those into the appropriate spaces.
6. Flesh out the preparation and facilitation portions of the lesson plan.
7. Identify subsequent lessons (or lesson needs) and place them in the appropriate space.

Tips

- More detail is better. To help students achieve the CCSS-ELA & Literacy requires careful attention the the steps in an learning interaction. The more time you spend articulating how you will lead students through the lesson, the more effective the lesson will be.
- Look at the charts in this section of the Framework that identify the standards and instructional shifts associated with different tools. These may provide you with different ways to think about what strategies might be useful.
- The first few times you use this template, use it to redesign and existing lesson. Having the content already can help you learn the template more easily.

Literacy-Rich Instructional Design Template

Lesson # _____ Title _____

Introduction	
Lesson Plan Description/Overview	
Instructional Outcomes *Content Learning Outcome*: *CCSS-ELA & Literacy:*	
Assessments *Summative:* *Formative:*	
Literacy Strategies You'll Use in This Lesson	
Before Reading/Learning:	
During Reading/Learning:	
After Reading/Learning:	

Literacy Rich Instructional Design Template (continued)

Before Reading/Learning (x minutes)

Literacy Outcome:

Teacher Preparation:

Teacher Facilitation:

During Reading/Learning (x minutes)

Literacy Outcome:

Teacher Facilitation:

After Reading/Learning (x minutes)

Literacy Outcome:

Teacher Facilitation:

At the End of the Class:

Assessment:

Suggested Subsequent Lessons

Instruction Tool 1: Literacy Rich Instructional Design Example #1

Lesson # Title

Introduction

Make connections to text while reading
Summarize

Lesson Plan Description/Overview

Students will write a detail or main idea of each section of the text. Students will collaboratively write a summary of John Todd's Living Machine.

Instructional Outcomes

Common Core State Standard:
2.4 Determine word meanings as they are used in text
8.2 Summarize text
Content Learning Outcome:
Write a summary of John Todd's Living Machine

Assessments

Summative:
Post It notes

Formative:
Summary

Literacy Strategies You'll Use in This Lesson

Before Reading/Learning:	Preview text and review yesterday's reading
During Reading/Learning:	Make connections
After Reading/Learning:	Group summarizing

Instruction Tool 1: Literacy Rich Instructional Design Exemplar #1 (continued)

Before Reading/Learning (x minutes)

Literacy outcome:
Students will collaboratively write a summary of text

Teacher preparation:
Group summarizing template

Teacher facilitation:
Review John Todd's Living Machine

During Reading/Learning (x minutes)

Literacy outcome:
Summary

Teacher facilitation:
Model identifying using heading to state main idea of section

After Reading/Learning (x minutes)

Literacy outcome:
Identify important details to include in a summary.

Teacher facilitation:
Demonstrate writing a detail to include in a summary from the first 3 sections

At the end of the class:
Collaboratively write a summary of John Todd's Living Machine

Assessment:
details on post it note
summaries

Suggested Subsequent Lessons

Vocabulary and Comprehension

Instruction Tool 1: Literacy Rich Instructional Design Exemplar #2

1 Lesson #

Introduction to Edgar Allan Poe Title

Introduction: Music has a profound effect on society which by its very nature is largely positive. It not only expresses the emotion and feeling of humanity through sound, but it also stimulates intelligence and learning through its core components. There are some perceived negatives to music also, but they are less prominent.
General description and overview of the lesson plan: This article explores these effects of music in greater detail. Students will read, make predictions, relate, summarize individually and as a group, and ultimately garner a better understanding of these effects.
Instructional Outcomes *Common Core State Standard:* 9-10.RI.2 "Determine a central idea of a text and analyze its development over the course of the text including how it emerges and is shaped and refined by specific details; providing an objective summary of the text." *Content Learning Outcome*: Students will have a better understanding of the effects of music on society, both positive and negative.
Assessments
Summative: Performance-Based Assessment (similar to PARCC) I.E. testing knowledge at a single point in time. *Formative:* Early or Mid-Year Assessment, Specific to Skill/Content Strengths
Literacy Strategies You'll Use in This Lesson

Before Reading/Learning:	*Develop Background Knowledge*. Discuss as a class how music positively and negatively effects them as musicians. Also try to predict a negative effect of music prior to the reading.
During Reading/Learning:	Inform students to mark difficult or unfamiliar words in the text as a *Comprehension Monitoring Tool*.
After Reading/Learning:	Have the students "test" their predictions about the negative effects of music based upon what they read.

Instruction Tool 1: Literacy Rich Instructional Design Exemplar #2 (continued)

Before Reading/Learning (15 minutes)

Literacy outcome: Develop Background Knowledge (also using Gradual Release Model!)

Teacher preparation: Prepare room, materials, instructions, lesson plan, and listening examples (in case time permits)

Teacher facilitation: Lead discussion of how music positively/negatively effects ME as their teacher to launch into discussion of the same by students. (Gradual Release!)

During Reading/Learning *20 Minutes*

Literacy outcome: Through exposure to complex text, students will read, analyze, and summarize a music education article using the Group Summarizing Template. They will use it to take notes and mark difficult or unfamiliar words.

Teacher facilitation: Monitor student progress, clarify instructions, and "redirect student efforts".

After Reading/Learning *30 Minutes*

Literacy outcome: Students will summarize the article as a group, gain understanding, and test their prediction about the negative effects of music.

Teacher facilitation: Monitor group progress; distribute group summary sheets (colored paper).

At the end of the class: Collect group summaries and read each to class.

Assessment: Evaluate each group summary based upon Brave's Rubric

Suggested Subsequent Lessons: **If time allows, listen to and identify types of music that may have a positive or negative effects on people and discuss why the students believe in either case.**

Instruction Tool 1: Literacy Rich Instructional Design Exemplar #3

Lesson # ___ Title: Growth of US Cities

Introduction

Students will be learning about major causes of the growth of American Cities. During this lesson, Students will learn about the negative & positive outcomes of continuous growth.

Provide a general description and overview of the lesson plan here.

During this lesson, Students will read an excerpt out of their textbook over the rapid growth of cities. Student will be ask to identify causes & effects of population growth on cities. Students will be taking their own notes while they read.

Instructional Outcomes

Common Core State Standard:

8.1.25 Students will learn how immigration affected American culture in the decades before the Civil War, including the growth of cities in the North.

Content Learning Outcome:

Students will be identifying major reasons for the growth of American cities & the problems that were caused by Urbanization.

Assessments

Summative:

Self test: Have students answer the questions they created from the reading & sub-headings.

Formative:

Unit Test

Literacy Strategies You'll Use in This Lesson

Before reading/learning:	Previewing text & Setting a purpose by coming up with questions using the headings & Subheadings.
During reading/learning:	Taking notes, using a graphic organizer
After reading/learning:	Self test, using the questions from heading

Instruction Tool 1: Literacy Rich Instructional Design Exemplar #3 (continued)

Before Reading/Learning (x minutes)
10 min

Literacy outcome:
Help students set a purpose for their reading
[illegible] of different types of informational text structure.

Teacher preparation:
Get an electronic copy of the textbook's reading strategy template.
Create the graphic organizer & complete the assignment before teaching

Teacher facilitation:
Guide students in completing step 1 + 2 on the textbook reading strategy template. Have the template on the whiteboard.

During Reading/Learning (x minutes)
15-20 min

Literacy outcome:
Build vocabulary & comprehension

Teacher facilitation:
The teacher will guide the students by modeling the note taking strategy for the first [illegible] on the graphic organizer.

After Reading/Learning (x minutes)
10-15 min

Literacy outcome:
Review information after reading to check for understanding.

Teacher facilitation:
Come together as a class, and fill in points students missed while taking notes.

At the end of the class:

Assessment:
Students will answer the [illegible] questions they created by using the notes they just completed.

Suggested Subsequent Lessons

This lesson can be used with long articles or other complex texts that include headings & sub-headings.

- Answering the questions at [illegible] can be done several times as the unit progresses to reinforce the material presented in the text.
- Teachers can create a quiz & test using the questions students created

Instruction Tool 2: Interactive Word Wall

Purpose

Use this strategy before, during, and after reading for vocabulary development:

- Build vocabulary related to a particular instructional focus
- Help students develop analytical skills like classification and deduction
- Support students in their writing and other composing activities
- Build sight word reading fluency

Description

An *Interactive Word Wall* is a systematically organized collection of displayed words. Both students and teachers can suggest additions to *Interactive Word Walls*. Students are asked to interact with words on the *Interactive Word Wall* on an ongoing basis. In this way, the words become an integral part of students' reading, writing, and speaking vocabulary.

Directions

1. Create a list for an *Interactive Word Wall* that will help students deepen students' vocabulary and enhance their reading comprehension.

   Examples of word wall lists:

   - Words connected to an upcoming unit of study
   - Words connected to specific instructional areas (e.g., math order of operations, historical terms, literary devices)
   - Difficult words found in textbook chapter
   - Words connected to a theme, book, or author
   - Related root words with different prefixes and affixes

2. Refer to the *Interactive Word Wall* throughout the unit of study about the content concept it relates to, being sure that students are actively interacting with the words on the wall.

Tips

- Have students keep a *Triple-Entry Vocabulary Journal* with terms on the *Interactive Word Wall.*
- Have students complete *Quick Writes* using words from the *Interactive Word Wall.*
- Use 3–5 words on the wall to write a summary sentence about a main concept.
- Create an Analytical Graphic Organizer that relates the words to one another.
- Write a narrative piece—short story, poem, description—that links several words on the *Interactive Word Wall* together in a meaningful way.

Interactive Word Wall Planning Template

Name _____ Date _____

Word Wall Concept _____

Learning Purpose _____

Directions

Think about the key ideas and concepts that will be covered in the textbook, other readings, or class instruction or discussion. Think of a way you could use an *Interactive Word Wall* to deepen students' understanding of vocabulary and course concepts. Define the learning purposes, some sample words, and three activities you could do to have students interact with the words.

Initial Word List (will be added to during unit)

Interactive Activity #1

Interactive Activity #2

Interactive Activity #3

Instruction Tool 3: Triple-Entry Vocabulary Journal

Purpose

This tool is used before, during, and after reading for vocabulary development:

- Help students understand key words when reading a text
- Provide an interactive way to learn new vocabulary
- Help students develop a customized glossary to the text that provides words in context, applicable definitions, and personalized memory/study aids

Description

The *Triple-Entry Vocabulary Journal* is a strategy for learning new vocabulary that uses a three-column note-taking format with columns for a word in context, definition in one's own words, and a picture, memory aid, or phrase related to the word.

Directions

1. Determine the key words students should understand while reading a selection.
2. Have students divide a notebook page into three columns. Label the columns:
    - Word in context
    - Definition in my own words
    - Picture, memory aid, or phrase
3. Model the strategy with several words.
    - In the first column, write down the sentence(s) within which the word is found, and underline or circle the word. Note the page on which you found the word.
    - Look up the word in the dictionary. Choose the meaning that fits the context of the word in your text. Write down a definition of the word in your own words in the second column.
    - In the third column, draw an image, jot a phrase, or create a memory device that will help you remember the word and its meaning.
4. Have students practice the strategy, sharing their definitions, and sharing the memory aids.

Tips

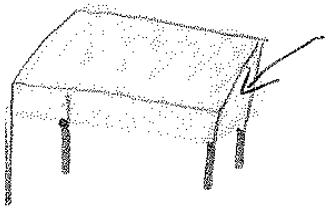
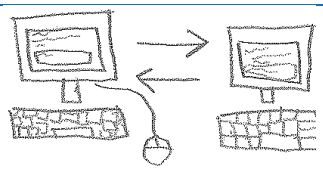
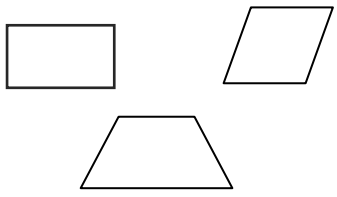
- Have students select words they do not know while reading. Assign a predetermined number of total words and/or how many words per page/section/ chapter the student should select to enter in their *Triple-Entry Vocabulary Journal* for each reading selection.
- Distribute different sections of a word list for an upcoming text to different students in small groups. Have students complete the *Triple-Entry Vocabulary Journal* in their groups and then ask students in each group to discuss and teach each other the words they will need to know for the text they are going to read.
- Have students compare and contrast their responses and discuss the words they found and did not know, thereby supporting the development of word knowledge.

Triple-Entry Vocabulary Journal Template

Name _____ Date _____

Word in Context	Definition in My Words	Picture, Memory Aid, Phrase

Triple-Entry Vocabulary Journal Examples

Word in Context	Definition in My Words	Picture, Memory Aid, Phrase
World Language		
el mantel Pero el mantel lo lavo yo.	Fábrico usado para decorar y proteger una mesa	
Respirando Están respirando siempre un aire de angustia que no las deja vivir.	El acto de tomar oxigeno en los pulmones	Respirate or respirator in English is about breathing.
Career and Technical Education		
Analogous Binary code for computers is analogous to human language; It allows computers to communicate	Having some things in common—like the purpose or job of something	
English Language Arts		
Hyperbole James won't really eat a horse. He's just prone to hyperbole.	An exaggeration to make a point or just for effect	I'm so hungry I could eat a horse.
Mathematics		
Quadrilateral Find the area of the quadrilateral below	Something with 4 sides	

Instruction Tool 4: Word Analysis

Purpose

This tool is used before, during, and after reading for vocabulary development:

- Define unknown words
- Make words memorable through understanding the parts that make up the word
- Connect new vocabulary to words already known
- Improve reading fluency
- Improve reading comprehension

Description

The *Word Analysis* strategy is a way of analyzing the structure of unknown words to derive their meaning. Students deconstruct words into prefixes, roots, and suffixes and make connections between these and other words sharing similar parts. Readers often combine this strategy with the contextual analysis of the sentence or passage in which the word is found in a text.

Directions

1. Identify words in an upcoming reading selection that can be analyzed using their roots and affixes (prefix or suffix).
2. Focus instruction on identifying the root word and seeing how the prefix and suffix function together with the root to create the meaning of the word. Model this for the class.
3. Have students practice covering the prefixes and suffixes to see the root words, then follow with practice in adding and removing prefixes and suffixes and discussing how this changes the meaning of the word. Do this as a class and then have students continue in pairs or small groups, putting their best guess of the meaning in the appropriate column on the template. Then review the definitions and see how close the guesses were, making sure students correct and refine definitions as necessary.
4. Once students are comfortable with *Word Analysis*, teach them the specific root words that relate to the content area and topic(s) of learning by providing practice with many words with the same root and/or affix. Ask students to generate other words that use the same root or affix, divide the list into groups of words, and have pairs or small groups analyze how each group of words is similar or different. This process of comparing words not only helps students more than memorizing a definition would, but also contributes to an understanding of how word parts influence word meaning and reinforces words related to the same concept.

Tips

- Combine the study of word parts with instruction in the use of context clues.
- Use vocabulary instruction strategies as appropriate to the specific words:
    - *Word Analysis* for a compound word like *piecemeal* or a pair of words like *uncomfortable* and *discomfort*
    - *Use a Triple-Entry Vocabulary Journal* or an *Interactive Word Wall* for technical terms that pertain to a specific topic like *algebra* or *electricity*

Word Analysis Template

Name _____ Date _____

Content Unit/Topic _____

Directions

Write the unknown vocabulary words in the left column. Divide the word into its parts and then develop a possible definition for the word.

Word	Prefix	Root	Suffix	Definition

Instruction Tool 4: Word Analysis Examples

Word	Prefix	Root	Suffix	Definition
Science				
Geology	Geo	Logy	-	Geo-earth, logy-study Geology is the study of the earth—solid earth and rocks.
Geography	Geo	Graphy	-	Geo-earth, graphy-write/writing. Geography is earth writing. In this case, it's about making maps of things.
Abdominal	-	Abdomen	Al	Abdomen—stomach, al—about Abdominal is about the stomach.
Music				
Prestissimo		Presto	Issimo	Presto—fast, issimo—very. Prestissimo means very fast.
Allegretto	-	Allegro	Etto	Allegro—fast, etto—a little. Allegretto means to play a little bit fast.
Social Studies				
Communism	-	Commun—together or shared	Ism – Idea or state of something	Communism is either the idea or the state of people living where they share everything. No individual property or money.
Supernumerary	Super More or extra	Numer— Number	y—about or characterized by	Supernumerary means characterized by extra or more than you need.

Instruction Tool 5: Knowledge Rating Guide

Purpose

This tool is used before, during, and after reading to improve comprehension:

- Introduce a list of key terms to students
- Determine students' knowledge of a word or concept
- Activate existing background knowledge
- Help students make connections to new concepts
- Assess learning when used before and after reading

Description

A before-, during-, and after-reading activity in which students analyze their understanding of vocabulary words or concepts from the text or unit of study.[43]

Directions

1. Select a list of important terms from the text. Prepare a handout that lists the terms followed by three columns: Know it/Use it, Can describe it/Do not use it, Do not know it/Do not use it.
2. Give the *Knowledge Rating Guide* with the terms to students. Ask each student to rate their level of knowledge about each term by placing an X in the appropriate column.
3. Place students in small groups to talk about the terms and/or lead the class in a discussion about the terms that students know.
4. Ask students to read the text.
5. After reading the text, have students reexamine their sheets and see what words they can now define/use.

Tips

- Ask students to write down definitions/explanations of terms they marked in the Know it/Use it column.
- Before discussing the terms as a class, have members of each small group discuss the terms and explain them to one another, and only discuss as a class the terms that no one knows.
- Have students write about what learning they identified by re-examining their sheets.

[43] Blachowicz, C., & Fischer, P. (1996). Teaching vocabulary in all classrooms. Upper Saddle River, NJ: Merrill/Prentice Hall.

Knowledge Rating Guide Template

Name _____ Date _____

Term	Know It/ Use It	Can Describe It/ Do Not Use It	Do Not Know/ Do Not Use It

Instruction Tool 6: Anticipation/Reaction Guide

Purpose

This tool is used before and after reading to improve comprehension:

- Supports close reading of text
- Motivate students to want to read text to see if prior knowledge is confirmed or disproved
- Require students to make predictions
- Activate students' existing background knowledge and set purpose for reading text
- Focus readers on the main ideas presented in text
- Help readers assess for misconceptions and reader-text discrepancies

Description

This tool is a questioning strategy that assesses prior knowledge and assumptions at the pre-reading stage and scaffolds students to identify where those assumptions are confirmed or refuted in the text.

Directions

1. Identify the important ideas and concepts students should focus on when reading.
2. Create 4–6 statements that support or challenge students' beliefs, experiences, and pre – existing ideas about the topic. The statement should be reasonably answered either way.
3. Set up a table for student responses like the template.
4. Before reading the text, have students react to each statement in the Before Reading column individually and be prepared to support their position.
5. Have students read the text, looking for whether their assumptions were correct. Have them fill out the rest of the sheet based on what they discover.
6. In small groups or as a whole class discussion, ask students to explain their initial responses to each statement. Discuss student responses, asking groups to explain any changes to, or confirmations of, their original responses.

Tips

- Make sure the statements you create are answerable in the text. Because the purpose of this tool is to support predictions and provide students with a purpose for reading, unanswerable questions tend to create frustration.
- Have students react individually in the Before Reading column and then try having a discussion before students read the text.
- Have students create review questions based on the statements and the information they gather.

Anticipation/Reaction Guide Template

Name _____ Date _____

Before Reading				After Reading	
Agree	**Disagree**	**Statement**	**Pages Cited**	**Agree**	**Disagree**
Conclusion(s)					

Anticipation/Reaction Guide Example 1

How To Swim Elementary Backstroke

1				2	
Answer *BEFORE READING*				Answer *AFTER READING*	
Agree	Disagree	Question/Statement	Pages where evidence found	Agree	Disagree
✓		Balance is an important factor when learning the Elementary Backstroke.	2	✓	
✓		When performing the elementary Backstroke the arms and legs move synchronously (at the same time).	1	✓	
✓		There are five active phases in the Elementary Backstroke.	1		✓
	✓	Throughout the entire action of the Elementary Backstroke, the arms and legs are kept under water.	1		✓
	✓	The Elementary Backstroke is an advanced swimming stroke.	1		✓
	✓	Once the third phase is complete, a short glide will occur.	1	✓	

Anticipation/Reaction Guide Example 2

Before Reading				After Reading	
Agree	Disagree	Statement *add your comments after reading	Numbered paragraph where evidence found	Agree	Disagree
	✓	Physical punishment (spanking) poses no long term effects on children. * I feel that spanking posts long term effects, because then you will remember to do right.	1		✓
	✓	Physical Punishment (spanking) does not lead to aggression towards others. * They say they found higher aggression levels	2	✓	
	✓	Spanking is practiced in many homes in America. * Yes 80% of preschoolers from 2010 week.	3	✓	

Instruction Tool 7: Chapter Preview/Tour

Purpose

This tool is used before reading to improve comprehension.

- Help students make connections by linking text information with their own knowledge
- Identify how the text structure signals ideas and concepts
- Draw students' attention to text features
- Help students learn to use reading aids provided within the text

Description

A guided tour of the chapter about to be read that asks students to answer brief questions and make predictions related to chapter headings, vocabulary, text structure, and graphics.

Directions

1. Model how to complete the *Chapter/Preview Tour* template.
2. Initially give students guidance in what to look for, e.g., bold vocabulary words, main ideas, broad concepts, text structure, important details, writing style, tone/mood, and themes.
3. Let students work collaboratively to preview text, complete a template, and share their ideas back to the whole class.
4. Have students complete *Chapter/Preview Tour* independently.

Tips

- This is a great activity for students to do in pairs.
- Have students describe in writing how the use of various text features helped them construct meaning from the text.
- Ask students to work with you to determine which sections of the *Chapter/Preview Tour* template are appropriate to use with different types of text (journal article, Web site text, chapter in a novel).
- For conceptually complex units, create a whole class *Chapter/Preview Tour*. Have students complete the template in pairs and then have each pair contribute to a whole class preview, discussing why groups selected different pieces of information to include.

Chapter Preview/Tour Template

Name _____ Date _____

Reading Assignment Chapter _____ Pages _____

Directions
As you look through the assigned chapter, respond to the prompts below.

1. What is the title of the chapter?
Create a question from the title.
2. List two headings or subheadings. Write a question for each.
Heading:
Question:
Heading:
Question:
3. Based on the *Introduction,* what will the chapter be about?
Based on the *Summary,* list two important ideas in the chapter.
a.
b.

Chapter Preview/Tour Template (continued)

4. List two important vocabulary words.
a.
b.
How do they appear in the text?
5. What kind of information do you get form words, phrases, or sentences in special type?
List two important terms or ideas pointed out in special type.
a.
b.
6. What types of visuals do they have in the chapter (charts, graphs, pictures, maps, etc.)?
List two important facts you learn from these visuals.
a.
b.
7. Based on your review, list the facts you already know about the topic of this chapter

Instruction Tool 8: Two-Column Notes

Purpose

This tool is used during and after reading to improve comprehension:

- Create a user-friendly system to record important ideas, related details, and the relationships between concepts
- Help students remember important points and deepen their understanding of content
- Help students organize information and thoughts for thinking, writing, studying, or presenting

Description

Two-Column Notes can be used with text, lectures, or when viewing media presentations to help students organize their thinking about specific content. It is sometimes called a double-entry journal when used with fictional text or when the focus is on a student's personal response to the text instead of on taking notes. When combined with a summary, this tool is often referred to as Cornell Notes.[44]

Directions

1. Ask students to divide their paper into two columns.
2. Mark the columns with the appropriate headings.

Example:

Fiction Headings	
Column 1	**Column 2**
Passage	Response
Character	Decision
Quote	Importance
Symbols/Images	Meaning or significance

Non-Fiction Headings	
Column 1	**Column 2**
Main Idea	Detail
Cause	Effect
Concept	Example
Issue	Connection to Own Life

3. Model how to do the following: In the left-hand column, write a sentence, quote, or cause from the selection along with the page number. In the right-hand column, write the definition, give an example, make a connection to your life, or list an effect.
4. Provide the specific words, quotes, etc., in the left-hand column that you want students to respond to or ask for detail about.
5. Have students complete two-column notes independently, making sure the headings fit the reading/purpose for reading.

Tips

- Students can share their responses with others and solicit feedback.
- Students can use two-column notes as study guides, support for writing essays/summaries, or to take notes from films or lectures.
- Ask students to write a summary based on the information in their notes.

[44] Paul, W. & Owens, R. (2011). *How to study in college* (10th ed). Boston, MA: Wadsworth, Cengage Learning.

Two-Column Note Taking Template

Name _____ Date _____

Directions

Fill in the appropriate headings that match your purpose for reading/listening. As you read/listen/view, take two-column notes about important facts, vocabulary, concepts, and other information you want to remember or will need to use.

Topic	Student Notes

Instruction Tool 9: Paired Reading

Purpose

This tool used during reading to improve comprehension:

- Give students practice in oral reading, to build fluency
- Provide practice with active listening, reading aloud, and summarizing
- Develop specific skills related to reading comprehension

Description

This combined reading comprehension and fluency strategy supports students to be actively involved in the structured reading aloud of a shared text. Students benefit from the intensive sessions of reading, speaking, and active listening.

Directions

1. Establish appropriate pairs of students.
    - In general, this strategy is most effective for building both comprehension and fluency when teachers avoid using the "helping model" to pair students. When possible, avoid pairing the most advanced or capable students with those struggling the most. This type of pairing has the greatest potential to frustrate both participants.
    - While partners do not need to be completely equal in their reading skills, creating pairs in which both participants contribute equally to the understanding of the text will improve student engagement and performance.
2. Basic paired reading requires establishing ground rules about when and how help will be asked for/offered when reading, how turns will be taken, and what each role will include. One basic set of ground rules might be the following:
    - In pairs, take turns reading a paragraph at a time from an assigned reading.
    - The reader reads in a low voice, loud enough only for the listener to hear.
    - When the reader completes the paragraph, the listener provides a summary of the paragraph that needs to be approved by the reader. If the summary is not clear or accurate, the pair goes back to the text to add what is necessary.
    - Then the two switch roles, with the first reader becoming the active listener and summarizer.

Tips

- Give directions for what the pair should do when they finish reading. Possible options include:
    - Discussing what they each found interesting about what they have read
    - Answering questions or completing a graphic organizer together or separately
    - Adding to their learning log or journal based on what was read
    - Asking the partners to write a collaborative summary of what they read
- As students get more comfortable with this strategy, let readers read longer segments of the text before switching roles.

Instruction Tool 10: Analytic Graphic Organizers

Purpose

This tool is used during and after reading to improve comprehension:

- Provide a visual way to analyze how information and ideas are linked
- Help organize information for note-taking, learning, and recall
- Show specific relationships, such as cause-effect, sequence, or comparison-contrast
- Synthesize information from different locations in the text or from multiple texts
- Convey understanding of information and concepts so misconceptions can be seen

Description

This strategy uses a visual format like charts, diagrams, and graphs to help students explore the characteristics, relationships, or effects of a complex topic. This supports students to organize their thoughts and construct meaning from text. Examples include cause-effect diagrams, comparison-contrast charts, and process flow diagrams.

Directions

1. Explain the purpose of using a graphic organizer to visualize how ideas link together.
2. Model how to complete a specific type of graphic organizer before asking students to complete that type in pairs and then individually.
3. Introduce several different graphic organizers. Present a variety of graphic organizers so that students can see how the shape of the graphic organizer shows how the information is connected.
4. Model for students how to select a graphic organizer depending on the purpose for organizing information: comparison, sequence, cause-effect, main idea-supporting detail, pro/con evidence, and so on.
5. Help students select an appropriate graphic organizer.
6. Assist students as needed while they organize the information.
7. Ask students how completing the graphic organizer helped them understand the text differently.
8. Students might discuss or complete *Instruction Tool 17: Quick Writes* to respond.

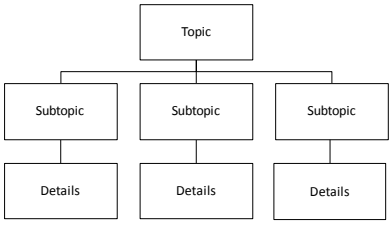
Tips

- Have students show their graphic organizers to one another and compare their responses.
- Have students design creative variations of graphic organizers to match the content or context.
- Have students use their completed graphic organizers as study guides, as outlines for essays or other writing, or as cue charts to generate or answer questions about text. For example, students could use their organizers to answer key comprehension questions:
    - What is the main idea?
    - What were the turning points in the chapter?
    - What are the important steps in this process?

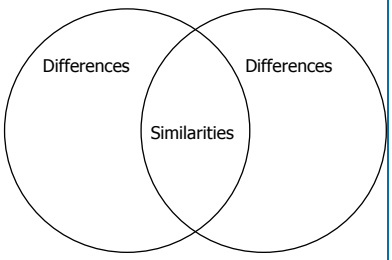
Analytic Graphic Organizer Templates

Analytic Graphic Organizer Templates

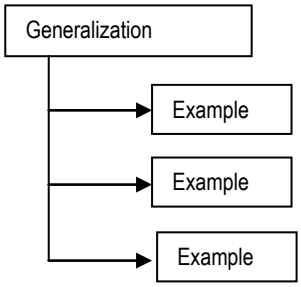
Main Ideas



Compare/Contrast

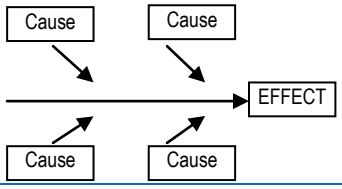


Generalization

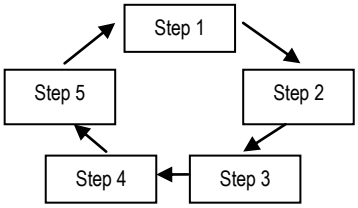


Cause/Effect

Cause(s)	Effect

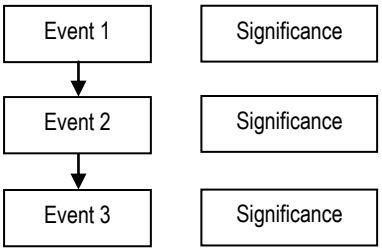


Process Cycle

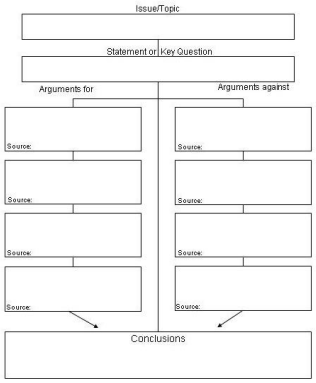


Sequence

Beginning



Discussion Web



Proposition/Support Outline

Proposition

Support

1. Facts
2. Statistics
3. Examples
4. Expert authority
5. Logic and Reasoning

List-Group-Label

List	Group	Label

Instruction Tool 11: Coding/ Comprehension Monitoring

Purpose

This tool is used during reading to improve comprehension:

- Support content area learning by focusing on key concepts
- Provide a way for students to engage in a dialogue with the author
- Help students identify how they process information while reading
- Help students identify what is difficult in the text so they can select and apply comprehension strategies to support their reading
- Develop metacognitive awareness and ability to monitor one's own comprehension

Description

This strategy uses marking or brief annotation of a text to help students to engage and interact with text and monitor comprehension as they read. Students place self-selected or teacher-selected marks or "codes" that indicate understanding, questions, reactions, or other agreed upon responses to a piece of reading.

Directions

1. Explain that this strategy helps readers monitor their reading so they can identify what they do or do not understand.
2. Choose 2–3 codes that support the purpose of the reading and reinforce targeted literacy habits and skills.
3. Model the strategy, using an overhead or whiteboard.
4. Guide the students to apply the coding strategy. Review the codes and have students code their reactions as they read on the page margins, lined paper inserts, or sticky notes.

Possible Codes (Use Only 2-4 Codes per Time)	
+ New information	**T-T** Text-to-text connection
***** I know this information	**T-W** Text-to-world connection
? I don't understand/I have questions	**T-S** Text-to-self connection
P Problem	**C** Cause
S Solution	**E** Effect
A I agree	**X** I disagree
! Interesting	

Tips

- Have students compare and discuss how they coded sections of the text.
- After students are comfortable with coding using teacher-provided codes, encourage them to develop additional codes appropriate for reading a particular text.

Instruction Tool 12: Sum it Up

Purpose

This tool is used after reading to improve comprehension:

- Focus students' attention on key words in the reading and how to use them to develop a summary
- Help students develop a process for selecting key words
- Help students use critical thinking to make decisions about what words to include in order to create an effective summary
- Provide an opportunity for students to make choices

Description

This strategy asks readers to select important words that relate to the main ideas of a text reading and to use them in a one- or two-sentence summary.[45]

Directions

1. Have students read the entire text selection or a designated portion of a text and underline the key words and main ideas, or list them on paper.
2. Distribute the *Sum it Up* template. In pairs or small groups, ask students to share their lists and reach a consensus on what words are important. These main idea words should be listed on the *Sum It Up* template in the space provided.
3. Ask them to write a 1–2 sentence summary of the important ideas of the text, using as many of the main idea words as possible. Together, the sentence(s) may only contain 20 words.
   Note: Establish up front if articles and conjunctions (i.e. *and*, *the*) count as words.
4. When each group has completed this activity, ask the group to write their summary on chart paper or the whiteboard. Compare their responses. If students read different portions of the same text, note that some of their sentences could now be put together to create a summary of the important ideas of the text.

Tips

- It's okay to vary the number of words to be included in the summary. Remember, though, that the value of having a specific number of words is in the way it scaffolds students thinking about what summarizing means. In general, this strategy is most successful at helping students learn how to summarize when a word limit is given, even if students are allowed to add an extra word or two if they need to.
- Have students create a summary sentence about what they know about the topic before reading the text. After they finish the *Sum it Up* activity, have them compare their knowledge before and after reading.

[45] Reading Quest. Available from http://www.readingquest.org/strat/

Sum It Up Template

Name _____ Date _____

Reading selection _____

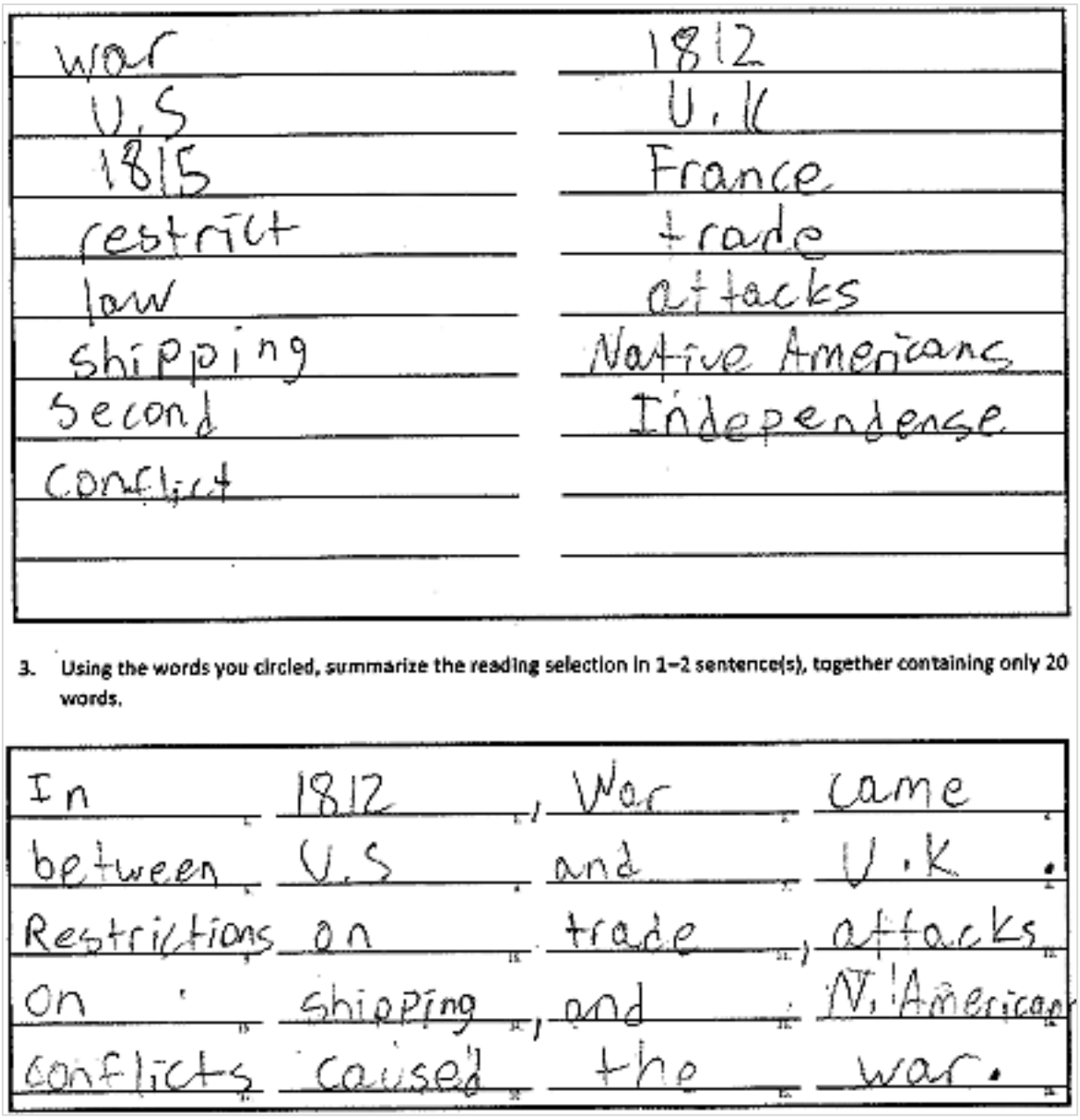
1. List key words that explain the main ideas of the text.
2. When done, circle (or highlight) the key words that are most important about the text.

Keywords	

3. Using the words you circled, summarize the reading selection in 1–2 sentence(s), together containing only 20 words.

Reading Summary			
1.	2.	3.	4.
5.	6.	7.	8.
9.	10.	11.	12.
13.	14.	15.	16.
17.	18.	19.	20.

Sum It Up Example 1

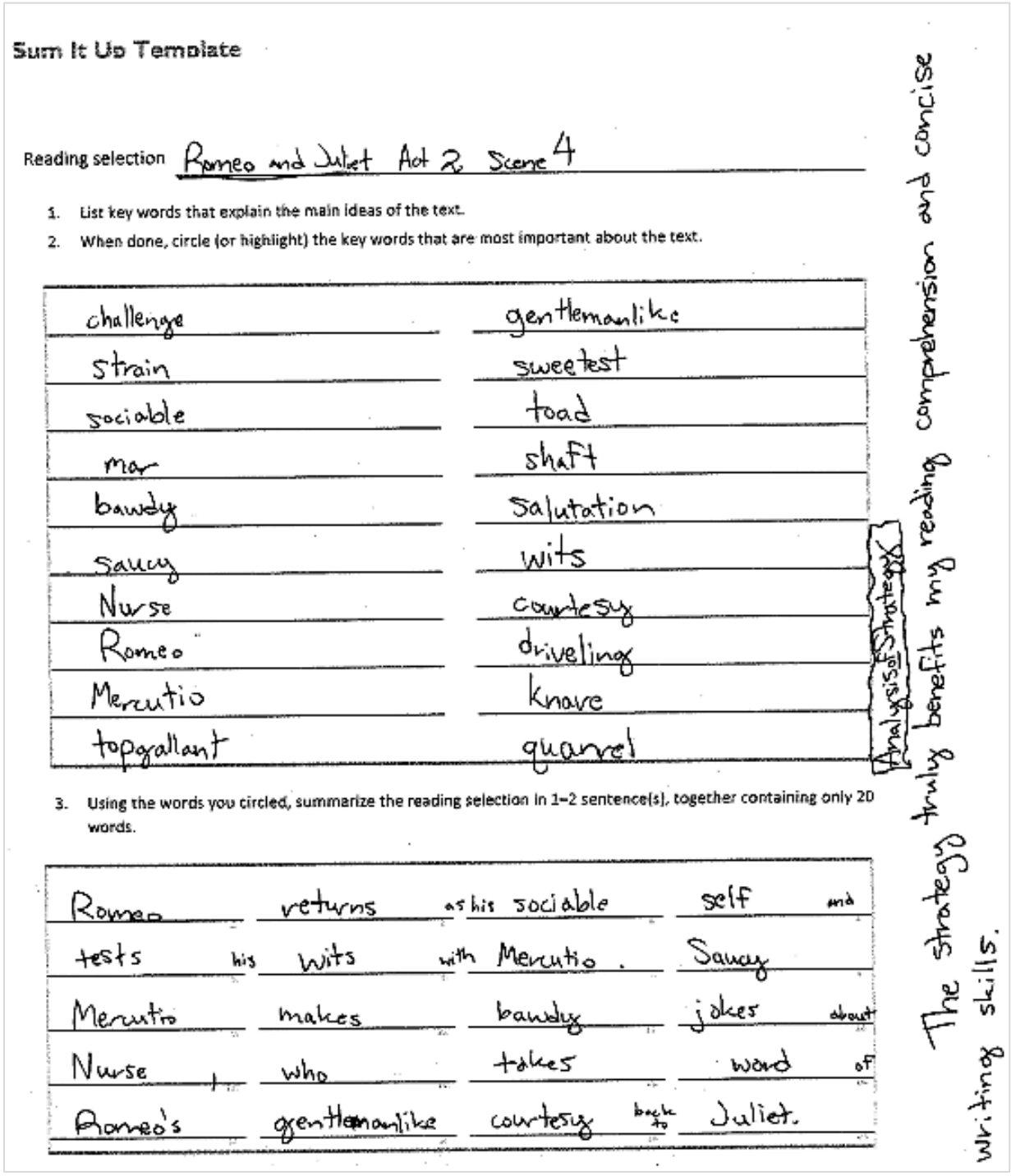


war	1812
U.S	U.K
1815	France
restrict	trade
law	attacks
shipping	Native Americans
second	Independense
conflict	

3. Using the words you circled, summarize the reading selection in 1–2 sentence(s), together containing only 20 words.

In	1812	War	came
between	U.S	and	U.K
Restrictions	on	trade	attacks
on	shipping	and	N. American
conflicts	caused	the	war.

Sum It Up Example 2



Sum It Up Template

Reading selection Romeo and Juliet Act 2 Scene 4

1. List key words that explain the main ideas of the text.
2. When done, circle (or highlight) the key words that are most important about the text.

challenge	gentlemanlike
strain	sweetest
sociable	toad
mar	shaft
bawdy	salutation
saucy	wits
Nurse	courtesy
Romeo	driveling
Mercutio	knave
topgallant	quarrel

3. Using the words you circled, summarize the reading selection in 1–2 sentence(s), together containing only 20 words.

Romeo returns as his sociable self and tests his wits with Mercutio. Saucy Mercutio makes bawdy jokes about Nurse, who takes word of Romeo's gentlemanlike courtesy back to Juliet.

Analysis of Strategy

The strategy truly benefits my reading comprehension and concise writing skills.

Instruction Tool 13: Give One, Get One, Move On

Purpose

This tool is used before and after reading to improve comprehension:

- *Use before reading to* help students brainstorm key ideas on a topic/reading to activate prior knowledge and build background knowledge
- *Use after reading to* help students to summarize and synthesize key concepts in the reading

Description

This strategy supports collaborative reflection on, interaction with, or review of a reading selection by using a protocol to solicit responses from multiple readers.

Directions

1. Set up a box matrix with six or nine boxes and hand out copies.
2. Ask students to write the topic of the template in the topic section. Then ask them to think of an important idea about the topic and write it in the first box.
3. Set up a rotation pattern (e.g., pass to the left) by telling students to pass the sheet to another student.
4. Students read what was written in the first box and write an idea in box 2. It can be the same idea they put in box 1 on their own sheet, as long as it is not the same idea that appears on the sheet that was passed to them. No ideas can be repeated on a paper. If their idea already appears on the paper, the student has to think of another idea to write.
5. Students continue passing on each paper, reading the ideas, and adding new ideas until all the boxes are filled with ideas.
6. Each sheet is returned to the original owner to read and reflect upon.

Tips

- Use as a summary of different text around the same topic.
- Set up a template to reflect different points of view or different arguments.
- Have students write summaries based on the sheets that they get back.
- Use to generate ways to respond to a text, story ideas for writing, etc.
- Use to help students summarize/reflect on a lecture/presentation.

Give One, Get One, Move On Template

Name _____ Date _____

Topic _____

Directions

Write the topic in the first section. Think of an important idea you have learned today. Write it down in box 1. Pass the sheet to another student who will read silently what was written in the first box. That student will add an idea in box 2. Do not repeat ideas that are already listed. Continue passing on the paper and adding ideas until all the boxes are filled with ideas. Return the sheet to the original owner.

1	2	3
4	5	6
7	8	9

Give One, Get One, Move On Example 1

Chapter 3 Review – Give One, Get One, Move On

Directions: Each pair will create a math problem using ideas from Chapter 3. In your group's box, provide the directions, the problem, and the solution. You will need to write a different problem for each group and attempt to vary your method. When done, pass the paper to the next group. Continue writing problems until you have given a problem to each group. Return this paper to the original group. It will be that group's responsibility (and homework) to solve every problem their sheet has collected.

Group 1 Substitution

$4x + 2y = -8$

$y = -x - 1$

$4x + 2(-x - 1) = -8$

$4x - 2x - 2 = -8$

$2x - 2 = -8$

$+2 \quad +2$

$\frac{2x}{2} = \frac{-6}{2}$

$x = -3$

$y = -3 - 1$

$y = -2$

$(-3, -2)$

Answer: $(-3, 2)$

Group 2 Solve by substitution

$2x + y = 13$

$x = y + 3$

$2(y + 3) + y = 13$

$2y + 6 + y = 13$

$3y + 6 = 13$

$-6 \quad -6$

$\frac{3y}{3} = \frac{7}{3}$

$y = 2.3$

$x = 2.3 + 3$

$x = 5.3$

$(2.3, 5.3)$

Answer: $(5, 3)$

Group 3 Solve by Substitution

$3x + 8y = 35$

$5x - 2y = 31$

$3x + 8y = 35$

$20x - 8y = 124$

$\frac{23x}{2.3} = \frac{159}{2.3}$

$x = 6.9$

$(6.9, 6.9)$

$3(6.9) + 8y = 35$

$20.7 + 8y = 35$

$\frac{8y}{8} = \frac{55.7}{8}$

$y = 6.9$

Answer: $(7, 2)$

Group 4

$y = 4x$

$1x + 2y = 18$

$1x + 2(4x) = 18$

$1x + 8x = 18$

$\frac{9x}{9} = \frac{18}{9}$

$x = 2$

$y = 4(2)$

$y = 8$

$(2, 8)$

Answer: $(2, 8)$

Give One, Get One, Move On Example 2

Give One, Get One

In the boxes below, write one thing you learned from yesterday's reading. Then, we will pass the sheet on and each person will add something. When all the boxes are filled, we will review what we read yesterday.

That the aunts are going to bury body in cellar	Einstein and Sonny are sleeping over at the aunts house	martha hasn't seen Mr. Hoskins so abby tryst to show her.
theyare putting the body through the winctow	they are trying to get eachother #to go to bed	Einstein finds a place to bury the body.
Aunts were going to open seat when Johnathon Pops out	Teddy finds autobiography of himself	Johnathon gets in fight with teddy

Instruction Tool 14: Question Answer Relationships (QAR)

Purpose

This tool is used during reading to improve comprehension:

- Characterize questions and know how to construct the answers using the text, where applicable
- Become more analytical and evaluative about responding to questions
- Separate factual, implied, inferred, and predictive information while reading
- Determine the supporting evidence for responses to questions

Description

This strategy involves students in assessing the thinking demands of a passage and developing answers for four types of questions: right there (answer is directly stated in text); think and search (answer is in the text, but not stated directly); author and me (the answer is not in the text but is derived from integrating the author's information with one's own background knowledge and experiences); and on my own (the answer is not in the text; the reader must develop the answers solely from background knowledge).[46]

Directions

1. Prepare a sample text reading with several questions that correspond to the four *QAR* types.
2. Explain that this strategy helps readers determine how to seek answers for questions about the text.
3. Show students the four types of *QAR* questions.

Right There	Think and Search
The answer is stated directly in the text	The answer is in the text but not stated directly. The reader interprets the meaning from different parts of the text.
Author and Me	**On My Own**
The answer is not in the text. The reader must read the text in order to answer, but must use personal knowledge with the information provided by the author.	The answer is not in the text. The reader must develop the answer based on knowledge and personal experience only.

4. Introduce several examples of Right There questions, and then introduce several Think and Search questions. Emphasize that both types of questions require locating information within the text.
5. Introduce several Author and Me and on my own questions for the same text reading.
6. Provide guided practice in small groups with several progressively longer pieces of text.
7. As students become more proficient, provide independent practice and give feedback to individual students about their *QAR* choices.

[46] Raphael, T. E. (1982). Question-Answering strategies for children. The Reading Teacher, 36, 186-191.

8. Once students can effectively use *QAR* to answer questions, have them generate their own questions to practice the various types and use *QAR* independently.

Instruction Tool 15: Literature Circles

Purpose

Use this strategy to support engagement with complex texts:

- Can focus on close reading of text
- Supports engagement and comprehension
- Scaffolds students into rich text discussion

Description

This is a brief description of a way to establish and run a literature circle, which is based on the work of Harvey Daniels.[47] This strategy can be used multiple times over the course of a term or school year.

Directions

1. Place students in small groups for literature circles. (4–6 students)
2. Identify a text for each group. This may be a whole-class text or different texts for each group.
3. Establish a meeting schedule for the group.
4. Decide on a post-reading strategy students should complete after they have finished their discussion.
5. Have students read a section of text, either in class or as homework. Consider some of the strategies that support comprehension to scaffold students' reading. *Instruction Tool 11: Coding/Comprehension Monitoring* can be particularly helpful.
6. To begin the discussion process, provide students with a list of open ended guiding questions. These should require students to dig into the text as much as possible.
7. Vary the level of the questions to encourage higher order thinking. Encourage students to add their own questions to the list.
8. Have each group appoint a discussion facilitator who will ask questions to the group and solicit responses from all members.
9. Have students discuss the questions on the list.
10. Instruction students to complete the post-reading activity.

Tips

- Provide students with interesting, appealing, and appropriate books for their ability level.
- Allow time for reading in class, if possible.
- Other than appointing a facilitator, avoid allocating "roles" for the group members.
- If needed, set a time limit for the discussions to keep students on track.
- Ask students to summarize their discussion in their journals or to reflect on their experience.

[47] Daniels, H. (2002). Literature Circles: Voice and Choice in Book Clubs and Reading Groups. United States: Stenhouse Publishers.

Instruction Tool 16: Text-based Fishbowl Discussion

Purpose

This tool should be used to build student speaking and listening capacity.

- Actively involves all students in open-ended discussion
- Supports comprehension and discussion of complex text
- Builds student capacity to respond to and consider multiple viewpoints

Description

This is a classroom discussion strategy in which students are divided into two groups: the inner circle, or fishbowl, where several people hold a discussion and the outer circle, where the rest of the students listen to and observe the discussion. At designated points, the teacher selects new individuals or individuals self-select to enter the fishbowl and continue the discussion.

Directions

1. Assign a short passage of text the day prior to the fishbowl. Use appropriate literacy strategies to support student comprehension as students read, analyze, and/or take notes individually.
2. Develop a scenario or series of questions around a topic associated with the text you want students to discuss.
3. On the day of the discussion, select the initial group of students who will begin the fishbowl discussion. Create a list of students who will enter the fishbowl later. Or set up a procedure for students to tap into the discussion on a rotating basis.
4. Explain the purpose and procedure for the fishbowl discussion. Remind the observers to take notes on the content and the process.
5. Ask the first question or set up the scenario that will be discussed.
6. Have students in the inner circle begin discussion. Students in the outer circle should take notes on the discussion. The following are ideas for the content of student notes:
    a. Important points about the content
    b. Points of agreement or disagreement
    c. Questions the discussion raises
    d. Reactions to points of discussion
7. Listen for appropriate discussion "breaks," or time the rotations one to two minutes apart.
8. At the end of the discussion, have the students write a brief summary of the discussion, citing three to five critical points that support their conclusion.

Tips

- Make sure students have their texts with them on the day of the discussion.
- It is important to create a list of questions that are text-focused and open ended.
- These work best with complex texts. If there is nothing to say about the text, the discussion will likely go nowhere.
- The more students practice this strategy, the better the conversations will become.

Instruction Tool 17: Quick Writes

Purpose

This tool is used before, during, and after reading to improve comprehension:

- Activate prior knowledge by preparing students for reading, writing, or a discussion
- Help students make personal connections
- Promote reflection about key content concepts
- Encourage critical thinking
- Organize ideas for better comprehension
- Increase background knowledge when shared
- Synthesize learning and demonstrate understanding of key concepts
- Reinforce vocabulary
- Provide a purpose for reading
- Assess student knowledge on the topic prior to reading

Description

A versatile strategy used to develop writing fluency, to build the habit of reflection into a learning experience, and to informally assess student thinking. The strategy asks learners to respond in 2–10 minutes to an open-ended question or prompt posed by the teacher before, during, or after reading.

Directions

1. Explain that a *Quick Write* engages students in thinking about a content topic before, during, and after reading. Stress that in a *Quick Write*, students respond to a question or prompt related to the text by writing down whatever comes to their minds without organizing it too much or worrying about grammar. Typically, a *Quick Write* is graded only for completion, not for quality or accuracy.
2. Select a topic related to the text being studied and define the purpose for the *Quick Write*.

   Examples:
   - Summarize what was learned
   - Connect to background information or students' lives
   - Explain content concepts or vocabulary
   - Make predictions, inferences, and hypotheses
   - Pose a question that addresses a key point in the reading selection

3. Tell the students how long they will have to do the writing, typically 2–10 minutes.
4. Use the *Quick Write* as part of instruction, assessment, and discussion.

Tips

- *Quick Writes* can be assigned as part of students' Learning Logs or Journals.
- Students can generate their own *Quick Write* questions and prompts.
- Students can share their responses in small groups and compare their answers.

Instruction Tool 18: RAFT (Role, Audience, Format, Topic)

Purpose

This tool is used before, during, and after reading to improve comprehension:

- Enhance comprehension of main ideas, organization, and point of view
- Process information and reflect
- Provide a creative approach for communicating what was learned that enhances engagement in writing or presentation tasks
- Encourage students to consider perspectives different than their own
- Help students communicate what they have learned using their preferred learning styles

Description

This strategy asks students to creatively analyze and synthesize the information from a particular text or texts by taking on a particular role or perspective, defining the target audience, and choosing an appropriate written format to convey their understanding of the content topic.[48,49]

Directions

1. Explain what a *RAFT* is and why it is helpful.
2. Model a *RAFT* for students using a simple text or well-known concept/topic.
3. Assign a text for students to read. Before reading, note the different perspectives in the text.
4. Brainstorm 3-4 possible *RAFTs* students could choose.
5. Asks students to select *RAFTs* to communicate their learning.

Tips

- Have students work in cooperative pairs or small groups.
- Have individual students or small groups brainstorm the four *RAFT* components rather than using the teacher-created list.
- Have students present their *RAFT* writing/presentations to other audiences.

[48] Adler, M.J. (1982). *The Paideia proposal: An educational manifesto*. New York: Macmillan.

[49] Santa, C. (1988). *Content reading including study systems*. Dubuque, IA: Kendall/Hunt Publishing.

Role-Audience-Format-Topic (RAFT) Template

Name _____ Date _____

Concept to be addressed in the RAFT _____

Ideas for RAFTs Related to this Concept _____

Role	Audience	Format	Topic

Your Choices for RAFT Components	
Role	
Audience	
Format	
Topic	

Instruction Tool 19: Draft + 1 Writing

Purpose

This tool is used after writing to improve comprehension:

- Improve individual traits of a draft
- Build capacity for revision
- Develop students' ability to reflect on their own writing

Description

This is an approach to writing revision that asks students to revise according to a single trait or focused correction area. It builds student's understanding of individual writing traits and improves their ability to recognize what each trait looks at in writing.

Directions

1. After students have written a draft a piece of writing, identify the trait/area around which you would like to focus students' attention.
2. Using a mentor text—your own piece of writing or an older sample, model the type of revision you'd like to see.
3. Have students review their draft and revise the writing only for this one trait.

Tips

- Have students act as editors, revising one another's work for this same trait.
- For learners who need a challenge, introduce Draft +2.
- For struggling learners, pair with an *Analytic Graphic Organizer* or an *Interactive Word Wall* to provide scaffolding.

Instruction Tool 20: Question the Author (QtA)

Purpose

This tool is used during reading to improve comprehension:

- Build students capacity to determine author point of view while reading
- Support comprehension of difficult but important sections of text
- Develop meta cognitive thinking to monitor and enhance comprehension

Description

This strategy asks students to pose questions that interpret and critique what the author is saying, thereby engaging them to construct meaning beyond what the text states.[50]

Directions

1. Introduce and discuss the topic of authorship of text materials, emphasizing nonfiction.

2. Explicitly teach and discuss ideas related to authors' opinions and decision-making about what to put in their writing. Discuss the author's biographical information and how it might affect the author's writing. Discuss the potential strengths and fallibility of the author in terms of the currency of their knowledge base, their ability to communicate ideas and information, and their assumptions about the audience that reads their writing.

3. Select a text passage to model the *Question the Author* process with students, choosing pre-determined pause points where you will initiate discussion to clarify the author's writing. Share questions you would ask the author about the messages or informational clarity or assumptions about the audience's knowledge, and so on.

4. Have students generate questions that query the author's intentions, not the text information itself. Discuss what the author is trying to communicate. Continue this guided practice with a series of passages across several different texts.

5. Ask students to generate their own *Question the Author* questions during paired reading, then independent reading. Post a list of example questions to help them get started, while making clear your expectation that they should formulate their own questions as well.

Tips (Examples of *Question the Author* Queries[51])

- What is the author trying to say? What is the author's message?
- How does this (section) connect with what the author told us before?
- What does the author assume we already know?
- Does the author say why? Is something missing, or something the author did not tell us?

[50] Beck, I.L., McKeown, M.G., Hamilton, R.L., & Kucan, L. (1997). Questioning the author: An approach for enhancing student engagement with text. Newark, DE: International Reading Association.

[51] Buehl, D. (2009). Classroom Strategies for Interactive Learning Newark, DE: International Reading Association.

Question the Author (QtA) Template

Name _____ Date _____

Reading Selection _____

Question the Author (Q&A) Template
Biographical Information about the Author:
Your Questions for the Author: • What is the author telling us (the reader)? • That is what the author wrote, but what is the author really saying? • What does the author want us to understand/know? • Does the author explain _____clearly? • What prior knowledge about _____does the author think the reader has?
Your Answers to these Questions:
Your Conclusions about the Author's Writing:

Instruction Tool 21: Group Summarizing

Purpose

This tool is used before, during, and after reading to improve comprehension:

- Involve students in constructing a meaningful synthesis of what they have read
- Help students learn how to do a summary before they are asked to create their own
- Provide practice in paraphrasing
- Allow students to demonstrate understanding of concepts through the completed group summary chart
- Link the different parts of the reading process

Description

This strategy encourages students to work together to preview text before reading, locate supporting information and examples during reading, summarize their ideas on a four-quadrant chart after reading, and use the notes as a structure to write the group summary.

Directions

1. Providing four major topics, model the group summary process by preparing a sample of a completed chart. Then set up the topics for a chart, with prepared summary sentences. After students read, have them link the sentences to the appropriate topic/concept and write sentences in the correct chart quadrant.
2. Divide students into small groups.
3. Have each student create a four-quadrant chart and label each quadrant with the topic or concept. Explain that the purpose for reading is to learn important information about each of the topics or concepts they selected.
4. During reading, students jot down notes under each heading with page number references.
5. After students have read the text and made their notes, tell the group to discuss what information and ideas they found that were important about the key words or concepts on the chart.
6. When the group agrees that the supporting information is important, it is added to the chart.
7. Once the charts are finished, ask the group to re-read what they have written and be sure their ideas are clearly expressed.
8. Have the group collaboratively put the ideas together in a written summary, typically one-three paragraphs on chart paper so they can share their summaries with other groups.

Tips

- Ask students to preview the text passage or chapter before reading to identify four major topics or concepts presented by the text author.
- Have students create their charts on the whiteboard or wall poster, so others in the class can see how the ideas of different groups are similar or different.
- Have students use the group summary chart to write an individual summary.

Group Summarizing Template

Name _____ Date _____

Title of Reading Selection _____

Directions

1. As you read, take notes on your Individual Summary Chart about important information related to the four key topics or ideas. List the paragraph or page numbers next to each note.
2. Form small groups to discuss your ideas and come to agreement on important information that should be listed in each of the four key topic/idea quadrants. Add the agreed-upon ideas to the Group Summary Chart. Re-read the final chart to be sure all ideas have been clearly expressed.
3. Collaboratively write a group summary, typically one to three paragraphs. When you have finished, copy it onto a large sheet of chart paper so it can be shared with other groups.

Individual Summary Chart	
Key Topic/Idea	**Key Topic/Idea**
Key Topic/Idea	**Key Topic/Idea**

Group Summary Chart	
Key Topic/Idea	**Key Topic/Idea**
Key Topic/Idea	**Key Topic/Idea**

Important! On separate paper, collaboratively write a summary of one to three paragraphs using the group notes. When the group has reviewed and agreed-upon the summary, copy it onto large chart paper so it can be shared with other groups.

Instruction Tool 22: Save the Last Word for Me

Purpose

This tool is used after reading to improve comprehension.

- Support students' interaction with text
- Promote reading comprehension
- Clarify and deepen thinking about content

Description

This strategy uses a collaborative format for the discussion of text developed by Daniel Baron and Patricia Averette.[52]

Directions

1. Divide students into groups of three to five. Give each student three to five index cards.
2. Assign a text to read. Ask students to write quotations they find interesting on one side of the card and why they find each quote interesting on the opposite side of the card.
3. After everyone is finished reading the selection and preparing their cards, the first person in each group shares one of his/her quotes but does not say why this interested him/her.
4. After everyone has taken about one minute to react/respond to the shared quote, the person who chose the quote shares why s/he selected it.
5. Discussion continues in this fashion with each person in the group taking one to three turns as time permits.

Tips

- Have the group complete a group summary of the text that was read
- Have the group debrief the session
- Have each person select a quote to write about in a response journal
- Ask each group to select the most important quote to share with the class with justification about why it was seen as significant

[52] Baron, D., & Averette, P. (n.d.). Save the last word for me. Available from http://www.delmarvaed.org/PBE-Save-the-Last-Word-for-Me.aspx

Save the Last Word for Me Template

Name _____ Date _____

Title of Reading Selection _____

Directions

Fill in the three boxes below with quotes that strike you as particularly interesting from the text. Make sure to copy the quote accurately and note the page where the quote is found. Then, below each quote, write why the quote interested you or what it made you think about. Bring the completed template to the meeting with your small group.

Quotes	Page
First Quote *Reason for selecting this quote:*	
Second Quote *Reason for selecting this quote:*	
Third Quote *Reason for selecting this quote:*	

Save the Last Word for Me Example

Title of reading selection _____

Directions: Fill in the three boxes below with quotes that strike you as particularly interesting from the text. Make sure to copy the quote accurately and note the page where the quote is found. Then, below each quote, write why the quote interested you or what it made you think about. Bring the completed template to the meeting with your small group.

First Quote And I am sure that, as all pendulums reverse their swing, so eventually will the swollen cities rupture like dehiscent wombs and disgorge their children back to the countryside

Pg # 72 *

Reason for selecting this quote

~~Excerpt~~ The big cities will loose their poupulation and everyone would go back to where they came from.

Second Quote I had dawdled too long and it was getting cold and I had visions of Napoleon at Moscow ~~and the Germans~~ and the germans at Stalingrad.

Pg # 173

Reason for selecting this quote

He has beendriving too long and he is becomeing sleepy.

Third Quote The rivers were full of logs, bank to bank for miles, waiting their turn at the abbatoir to give their woody hearts so that the bulwarks of our civilization such as time magizine and the Daily News can survive, to defende us against ignoriance

Pg # 74

Reason for selecting this quote

Logs of wood are just in the river waiting their to be changed into things such as Magazines and paper.

Instruction Tool 23: Textbook Reading Strategy

Purpose

This tool is used before, during, and after reading to improve comprehension:

- Help students set a purpose for their reading
- Develop understanding of different types of informational text structures
- Build vocabulary and comprehension
- Review information after reading to check for understanding

Description

The *Textbook Reading Strategy* is designed to support students while reading complex, nonfiction textbooks. Students are often challenged when reading textbooks. The format of textbooks changes from source to source, and uses complex, Level Three vocabulary. The strategy encourages students to focus on the format of the text, the important features of the text, and provides support before, during, and after the reading process.

Directions

1. Preview the Text:

    a. Read the chapter title, headings, sub-headings, and bold faced words.
    b. Look at pictures, charts, graphs, and diagrams. Read the captions.
    c. Read the introduction or the 1st paragraph of the section/chapter.
    Notes for the teacher: Model this process to start. This step should only take 1-2 minutes when students are proficient.

2. Setting a Purpose for Reading:

    a. Use the headings and sub-headings to create questions. The questions include who, what, when, where, and how formats.
    Notes for the teacher: Teachers may need to model this process several times. They may also opt to assign a specific number of questions to create if there are a number of headings/sub-headings in the text.

3. Choose a Note-Taking Strategy:

    a. Ask students to decide what type of notes would work best with the assigned text. Have students set up the notes during this step.
    Notes for the teacher: Teachers will need to pre-teach note taking skills. They can choose different note-taking methods to teach and introduce each one to students. This step is meant to help students decide which method matches the text best, and allows them to set up the notes before beginning the reading process.

4. Read and Take Notes:

    a. Students read the text and take notes as they go. Some students may opt to read the entire piece first and then go back, reread and take notes. Either method is fine with this strategy.

    Notes for the teacher: This step is fairly independent, but teachers may need to provide shorter or longer reading assignments for students. Considering student needs and abilities is an important part of this step.

5. Go Back and Review the Notes:

    a. During this stage, students examine their notes and look for any gaps. Are there terms left to define? Did students miss a section? Do they need to fill in their notes? Students ensure their notes are complete.

    Notes for the teacher: Modeling this step is important. Many times students are unsure of how to check their notes. With adequate modeling and support, students will become proficient at filling in any gaps.

6. Answer the Questions and Self-Test:

    a. Using the questions created in step 2, students use their notes to answer the questions in complete sentences. This serves as a review of the material. If needed, students can go back into the text to answer the questions. If this occurs, then students should add to their notes as well as answer the question.

    b. Once the questions are completed, students can self-test by looking at the questions, covering up the answers, and trying to answer them aloud. This can also be done in pairs or groups of three. Students can use the variety of questions to review the material.

    Notes for the teacher: This step is used to review the material in the text. It can be repeated in several different ways including in pairs or small groups, or even as a whole class.

Tips

- This method can be used with long articles or other complex texts that include headings and sub-headings.
- Students can use the notes to keep track of vocabulary terms and this strategy can supplement one focusing on vocabulary acquisition.
- Answering the questions as a review can be done several times as the unit progresses to reinforce the material presented in the text. Teachers can vary the format using pairs, small groups or whole class instruction.

Textbook Reading Strategy Template

Name _____ Date _____

Title of Reading Selection _____

Step	Student Plan	Student Reflection
Preview the Text	**Did you:** • Read the title • Read headings/subheadings • Look at the pictures/graphics/charts etc. • Read the captions • Read the first paragraph	
Set a Purpose for Reading	**Did you:** • Create questions using the headings and subheadings • Form questions in who, what, when, where, how format	
Choose a Note-Taking Strategy	**Did you:** • Decide how to format your notes based on the text • Set up your notes using the chosen format	
Read and Take Notes	**Did you:** • Read carefully • Take notes • Look for new vocabulary	
Review the Notes	**Did you:** • Look through your notes to identify any gaps • Go back into the text and reread as needed • Fill in any missing gaps in your notes	
Answer the Questions and Self-Test	**Did you:** • Use your notes to answer the questions from step 2 • Check your answers in the text • Self-test using the questions and answers	

Textbook Reading Strategy Example 1

Title of reading selection: Rapid Growth of Cities + Urban Problems

Textbook Reading Strategy

Step	Student Plan	Student Reflection
Preview the Text	Did you: • Read the title • Read headings/subheadings • Look at the pictures/graphics/charts etc. • Read the captions • Read the first paragraph	Rapid Growth of Cities + urban Problems -city life picture - busy, crowded - industry was a big part of cities
Set a Purpose for Reading	Did you: • Create questions using the headings and subheadings • Form questions in who, what, when, where, how format	what was the cause of the rapid growth in cities? what were the urban problems that occured?
Choose a Note Taking Strategy	Did you: • Decide how to format your notes based on the text • Set up your notes using the chosen format	graphic organizer
Read and Take Notes	Did you: • Read carefully • Take notes • Look for new vocabulary	-middle class -between wealthy + poor -tenements - apartments w/ many people
Review the Notes	Did you: • Look through your notes to identify any gaps • Go back into the text and reread as needed • Fill in any missing gaps in your notes	
Answer the Questions and Self-Test	Did you: • Use your notes to answer the questions from step 2 • Check your answers in the text • Self-test using the questions and answers	-Immigrants moved from Europe for many reasons. -cities were crowded and unsafe.

Instruction Tool 24: Frayer Model

Purpose

This tool is used before or after reading to improve comprehension:

- Help students form an understanding of an unknown word or concept
- Help students differentiate between a definition of a concept or vocabulary word and those characteristics that are associated with it
- Build students' capacity to analyze and synthesize information

Description

A *Frayer Model* is a graphic organizer that helps students form concepts and learn new vocabulary by using four quadrants on a chart to define examples, non-examples, characteristics, and non-characteristics of a word or concept.[53]

Directions

1. Select the word or concept to be defined using the Frayer Model.
2. Show the *Frayer Model* and explain the four quadrants.
3. Model how to use the *Frayer Model* to define a concept, using a simple example that students can understand.
4. Have students brainstorm a list of words and ideas related to the concept and then work together to compete a *Frayer Model*.
5. Have students create a definition of the concept in their own words.

Tips

- Describe rationale for examples and non-examples.
- Use the *Frayer Model* as a note taking strategy during reading.

[53] Frayer, D., Frederick, W.C., &Klausmeier, H.J. (1969). *A schema for testing the level of cognitive mastery*. Madison, WI: Wisconsin Center for Education Research.

Example

Brainstorming List		
checkbook calendar	small box with former or next month	photos or illustrations
yearbook	dates of holidays	diary
birthday chart	days of the week	months
dates placed on correct day of week for the year of the calendar	desk calendar	
wall calendar	space to record notes or plans	

Concept Analysis

Essential characteristics

days of the week
dates placed on correct day of week for the year of the calendar

Non-essential characteristics

Month view/week view
photos or illustrations
dates of holidays
small box with former or next month
space to record notes or plans

CALENDAR

Examples

wall calendar
desk calendar
phone calendar

Non-examples

yearbook
birthday chart
game schedules

Definition

A calendar is something that has dates on it placed on the correct day of the week for a given year. It might have views. It may have different views for months or weeks, images, places for notes and designations for holidays. Calendars can be on your wall, your desk, or your phone or computer. Birthday charts, game schedules and yearbooks aren't calendars, even though they may have dates on them and images, because they don't have every date listed on the correct day.

Frayer Model Template

Name _____ Date _____

Directions
Place the concept to be defined in the center square of the chart. Brainstorm a list of all the words you know that relate to the word or concept. Classify all of the brainstormed words into one of the four boxes in the chart. Use the information to write a definition of the concept.

Brainstorming List		

Concept Analysis	
Essential Characteristics	**Non-essential Characteristics**
Examples	**Non-examples**

Definition

Instruction Tool 25: Proposition Support Outline

Purpose

This tool does is used before, during, and after reading to improve comprehension:

- Develop higher order critical thinking skills, particularly analysis and evaluation
- Help students focus during reading as they look for supporting arguments and draw conclusions
- Help students separate fact and opinion in a reading selection and analyze the justification given to support conclusions or generalizations
- Help students learn to identify information that reflects opinion, bias, personal viewpoints, hypotheses, and debatable assumptions or assertions

Description

This analytical graphic organizer asks students to set forth a hypothesis/proposition and list the arguments and evidence from the text to support or refute the statement.

Directions

1. Introduce the term *proposition* as a statement that can be argued as true.
2. Discuss fact and opinion. Brainstorm examples and have students offer criteria for separating fact and opinion.
3. Test the student criteria using the list of proposition statements for students to identify as fact or opinion.
4. Assign a reading selection that features one or more strong propositions and have small groups of students identify the key propositions of the selection.
5. Have student groups then evaluate each of these statements, looking for evidence of opinion, bias, or personal viewpoints.
6. Have student groups identify the statement as fact or opinion after taking notes that describe the supporting evidence: facts, statistics, examples, expert authority, logic, and reasoning. (These can be put on a graphic organizer chart.)
7. Have the groups share their conclusions with the entire class. Encourage further discussion of any statement about which the groups cannot agree.

Tips

- Use the *Proposition/Support Outline* for independent research so students scrutinize reference materials for relevant information and arguments.
- Have students write a position paper or analyze multimedia information related to a proposition, supporting it with appropriate facts, statistics, examples, expert authority, and logic/reasoning.

Proposition/Support Outline Template

Name _____ Date _____

Topic _____

Proposition _____

Evidence	Source
Facts/Statistics	
Examples	
Expert Authority	
Conclusions (Based on Logical Reasoning, not Just Preference/Opinion)	

Instruction Tool 26: Semantic Feature Analysis

Purpose

This tool is used before, during, and after reading to improve comprehension:

- Build vocabulary by learning key vocabulary terms as concepts
- Develop a visual representation of the elements or characteristics of key concepts
- Develop the analytical skills of categorizing and comparing/contrasting
- Activate prior knowledge when used before reading
- Assess student understanding when used during or after reading

Description

This analytical strategy helps students examine related concepts by recording distinctions between terms according to particular criteria across which the concepts can be compared.[54]

Directions

1. Select a reading that discusses many examples of a single concept, such as a chapter in a content-area textbook or a short story with many characters.
2. Select a category of concepts to be analyzed. Examples: types of government, mammals, geometric shapes, human diseases, characters in a play, ecosystems
3. Using the *Semantic Feature Analysis Template*, list several terms within this concept down the left vertical column. Across the top, list several key features (traits, properties, criteria, or characteristics) associated with any of the examples listed down the left side.
4. Model the process of completing the grid using a think-aloud to explain your thinking to the students as you determine whether to mark a term with a **+**, **-**, or **?**.
5. Have students read the text selection and then code, based on their reading, what key features are associated with which terms.
6. Compare individual or paired responses in small groups. Examine the grid and discuss similarities and differences between the concept terms. If two terms have the same patterns, discuss if there is a feature that differentiates them that could be added to the list.

Tips

- Have students develop generalizations that can be tested against the grid.
- Divide the key feature columns into “before” and “after” so students can see how their thinking changes when the semantic feature analysis is done before and after reading.
- Challenge students to come up with different examples and additional key features.
- Have students create the concept terms and features on their own, based on the reading.

[54] Anders, P.L., & Bos, C.S.. (1986). Semantic Feature Analysis: An interactive strategy for vocabulary development and text comprehension. *Journal of Reading*. 29 (7), 610-616.

Semantic Feature Analysis Template

Title of Reading Selection

Topic

Directions
After you read the text selection, code what characteristics are associated with which terms.

Codes

- **+** If the term typically possesses that feature
- **–** If the term does not typically include that characteristic
- **?** If it is debatable or if the key feature depends upon the specific context/situation

Concept Terms	**Key Features**							

Semantic Feature Analysis Example 1

Ch 3—Science Textbook

Title of Reading Selection

Animal Classification

Topic

Concept Terms / Key Features	Eat Plants	Eat animals	Eat dead or rotting things	Eat members of their own species				
Herbivore	+	-	+/-	-				
Carnivore	-	+	-	+				
Detritivore	-	-	+	+/-				
Omnivore	+	+	+	+/-				
Scavenger	+	+	+	+				

Semantic Feature Analysis Example 2

Various Articles

Title of Reading Selection

Impressionists

Topic

Concept Terms / Key Features	Based in Paris	Focused on Portraits	Focused on landscapes	Worked on multiple canvasses at the same time	Worked largely in pastels	Worked largely in oils	Is known for sculpture	
Monet	+	-	+	+	-	+	-	
Cassat	+	-	+/-	-	-	+	-	
Pissarro	+	-	+	-	-	+	-	
Renoir	+	+	-	-	-	+	-	
Degas	+	+	+/-	-	+	-	+	

Instruction Tool 27: Word Sort

Purpose

This tool is used before and after reading to improve comprehension:

- Help students learn vocabulary by comparing, contrasting, and classifying words based on characteristics or meanings
- Help students recognize the relationships and differences between terms that are related to the same concept
- Develop students' ability to reason through analysis, classification, induction, and analogy
- Enhance students' interest in vocabulary development through a multi-sensory experience as they read, write, and manipulate words while sharing their thinking with others
- Develop divergent thinking when open sort is used

Description

Word Sort is a classification strategy where the teacher provides lists of words that students cluster together in meaningful ways to evolve main ideas or determine conceptual relationships (closed sort). The students may also sort the words by characteristics and meanings and then label the categories (open sort).[55]

Directions

1. Have students copy vocabulary terms onto index cards, one word per card.
2. Have students sort the words into categories, either by providing the categories (closed sort) or having the students generate the categories (open sort).
3. Have students share the reasoning and evidence for the way the vocabulary is sorted.
4. Have students copy vocabulary words onto index cards or strips of paper, one for each word.

Tips

- Have students sort the words into a *Venn diagram*, then summarize their findings in a *Quick Write*.
- Differentiation suggestion: Match the complexity of the vocabulary terms used in the sorts to students' varied instructional levels.

[55] Gillet J., & Kita. M.J.(1979). Words, kids, and categories. *The Reading Teacher*, 32, 538-542.

Word Sort Template

Name _____ Date _____

Categories		

Words to Sort		

Instruction Tool 28: Science Word Journals

Purpose

This tool is used before, during or after reading to improve comprehension:

- Help students identify vocabulary terms
- Build and use science vocabulary
- Increase student capacity to learn from text

Description

An adaptation of the *Triple-Entry Vocabulary Journal*, here students keep track of the words, using scientific texts to derive context clues, memory aids, and other information about the vocabulary. When students use a journal word, then they record the new sentence in their journal as well. Students are asked to share their words with the class or with a small group. This increases the number of content specific terms students learn throughout a unit or lesson. (Also see *Instruction Tool 3: Triple-Entry Vocabulary Journal*.)

Directions

1. Before reading: Students will record new words in their science word journals.
2. During reading: Students will read a piece of text and identify unknown or new words in their journal.
3. After reading: With a group or on their own, students will go back into the text and look for unknown or new words. They will add these words to their journal.
4. Once the words are recorded, students will complete the following items in their science word journals:

    a. Write the word as it is used in context or as defined in the text. Record the sentence and page number.
    b. Define the word in student friendly terms.
    c. Use the word in a new, original sentence, using the appropriate context.
    d. Draw a picture or a symbol to represent the word.
    e. Create a section to add new sentence examples as the word is used again in the future. Does it have many meanings or just one?

5. Allow students to share their words with a partner, small group or as a whole class. Students should record words that their peers identified. This process can be repeated throughout the course of a unit or group of lessons.

Tips

- Science word journals can be used with films, articles or other sources of information (online, electronic etc.)
- Students can keep a group journal or use this with lab vocabulary.

Instruction Tool 29: Five-Step Mathematical Problem Solving Graphic Organizer

Purpose

This tool is used before, during, and after reading:

- Improve students' abilities to read and solve math word problems
- Activate prior knowledge and experience that can be used to solve new problems
- Provide a graphic structure that helps students use a step-by-step problem-solving technique and remember that a single math problem with a single conclusion may be solved in multiple ways

Description

This graphic organizer provides a step-by-step reasoning process for students to set up and solve mathematical word problems. The diamond shape of the arrows reinforces that a word problem (top point of the diamond) can be solved in multiple ways (middle of the diamond) but results in the same convergent conclusion (bottom point of the diamond).[56,57]

Directions

Show students the diamond-shaped graphic organizer as you introduce the five-step problem solving process. Explain that the top point of the diamond is the precise problem statement and the bottom point of the diamond is the precise answer.

1. Explain that the process occurring in the middle section of the diamond can involve a variety of problem solving steps that depend on a person's prior knowledge and reasoning about the problem, but will lead to the same solution.
2. Explain the first step, understanding and restating the problem. Encourage students to ask themselves the following questions.
   - What are you trying to find out or solve?
   - Do you understand all of the vocabulary in the problem?
   - What information is known? What information is unknown or unneeded?
   - How can you restate the problem in your own words so it is clear and makes sense?
3. Discuss step 2, how to find needed data/information.

   Prompts:

   - What key words are provided that suggests the type of operation that needs to be performed?
   - What formulas or equations are suggested from the numerical data?

[56] Braselton, S., & Decker, C. (1994). Using graphic organizers to improve the reading of mathematics. *Reading Teacher, 48* (3), 276-81.

[57] Polya, G. (1945). *How to solve it: A new aspect of mathematical method*. Princeton, NJ: Princeton University Press.

4. Discuss the types of strategies that can be used in step 3, plan what to do.
   Prompts:

   - Think of similar problems you have solved before
   - Create a chart, diagram, picture, or model
   - Determine if there are any patterns
   - Write an equation or use a formula
   - Use an estimate/guess and check it
   - Consider if the problem can be worked backward or if possibilities can be eliminated
5. Discuss step 4, finding the answer. Perform and keep any calculations or other actions needed and check each step of the plan as it is accomplished.
6. Confirm that, in step 5, the answer is reviewed against the original problem and makes sense and is reasonable. In some cases, evidence that the problem was solved correctly may be required. Emphasize that this is the most important step in the five-step process.
7. Illustrate the process by modeling the thinking involved in each step of the problem solving using a simple, actual problem.
8. After students use the five-step process to solve a problem, determine if the techniques would work for other problems or if there were multiple techniques used by students for finding the solution.
9. Have students study *heuristics*, the rules of mathematical problem solving.
10. Have students write a summary of their rationale for solving the problem the way they did.

Five-Step Mathematical Problem Solving Template

Directions

Use this organizer when working on a word problem. First, decide what you are trying to find out or solve. Then, list the data/information you need to solve the problem. The next steps are to describe your plan for solving the problem, derive the answer, and then check it against the original problem to be sure your answer makes sense and double-check that the solution is correct.

1. Understand and restate the problem.
2. Find needed data/information.
3. Plan how to solve the problem.
4. Find the answer.
5. Check your answer.

Instructional Tool 30: Math Journals

Purpose

This tool is used before, during, and after reading to improve comprehension:

- Help students develop the language of mathematics
- Build students capacity to explain their process and reasoning

Description

These journals include short, frequent prompts to encourage students to write mathematically. Students practice problem solving and writing about their methods, graphing, and other techniques in the journals. They are encouraged to use appropriate terminology to demonstrate their understanding of numeracy. Students can include numerical work with their written response, but they must explain it using given terminology.

Directions

1. Hand out a small journal to each student or ask them to bring in a notebook to use for a mathematics journal. (Teachers can create journals using paper and a three-hole punch if notebooks are unavailable.)
2. Provide daily or weekly prompts for students to journal about—ones that require both numeracy and literacy. These prompts are an extension of the curricular materials, but require students to write about their process, telling how they arrived at their answer. Students can also create and solve their own word problems in the journals. Teachers can rotate the types of problem solving used in the journal.
3. Students can share their answers with a partner, small group, or with the whole class. Teachers can use the journals as formative assessments to inform instruction. The journals will indicate how a student approaches a problem and whether or not they are proficient in both mathematics and literacy-based skills.

Tips

- The journals can be scaffolded and differentiated to meet the needs of different groups of students. Teachers can provide different levels for each prompt. Students can begin with the basic level and work from there or complete their assigned prompt.
- Students can work with a pair to solve the problem and come up with a written response with their partner. The pairs can share out with one another to discuss the process.
- Whole-class instruction can follow math journals based on the results of the problem given. Teachers can use the information to guide future instruction.

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